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Seventh Report

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Agriculture Labor and Industry

OF THE

STATE OF MONTANA

FOR THE

Year Ending November 30, 1900



J. H. CALDERHEAD, Commissioner
OLIVER M. HOLMES, Chief Clerk



Helena, Montana
Independent Publishing Company
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1900



State of Montana,
Bureau of Agriculture, Labor and Industry.
Helena, Montana, December 1st, 1900.

To His Excellency, ROBERT B. SMITH,
Governor of Montana:

Sir:—In accordance with statutory requirement, I have the honor to herewith present you the Seventh and the First Biennial Report of the Bureau of Agriculture, Labor and Industry of the State of Montana.

I am, very respectfully,

J. H. CALDERHEAD, Commissioner.

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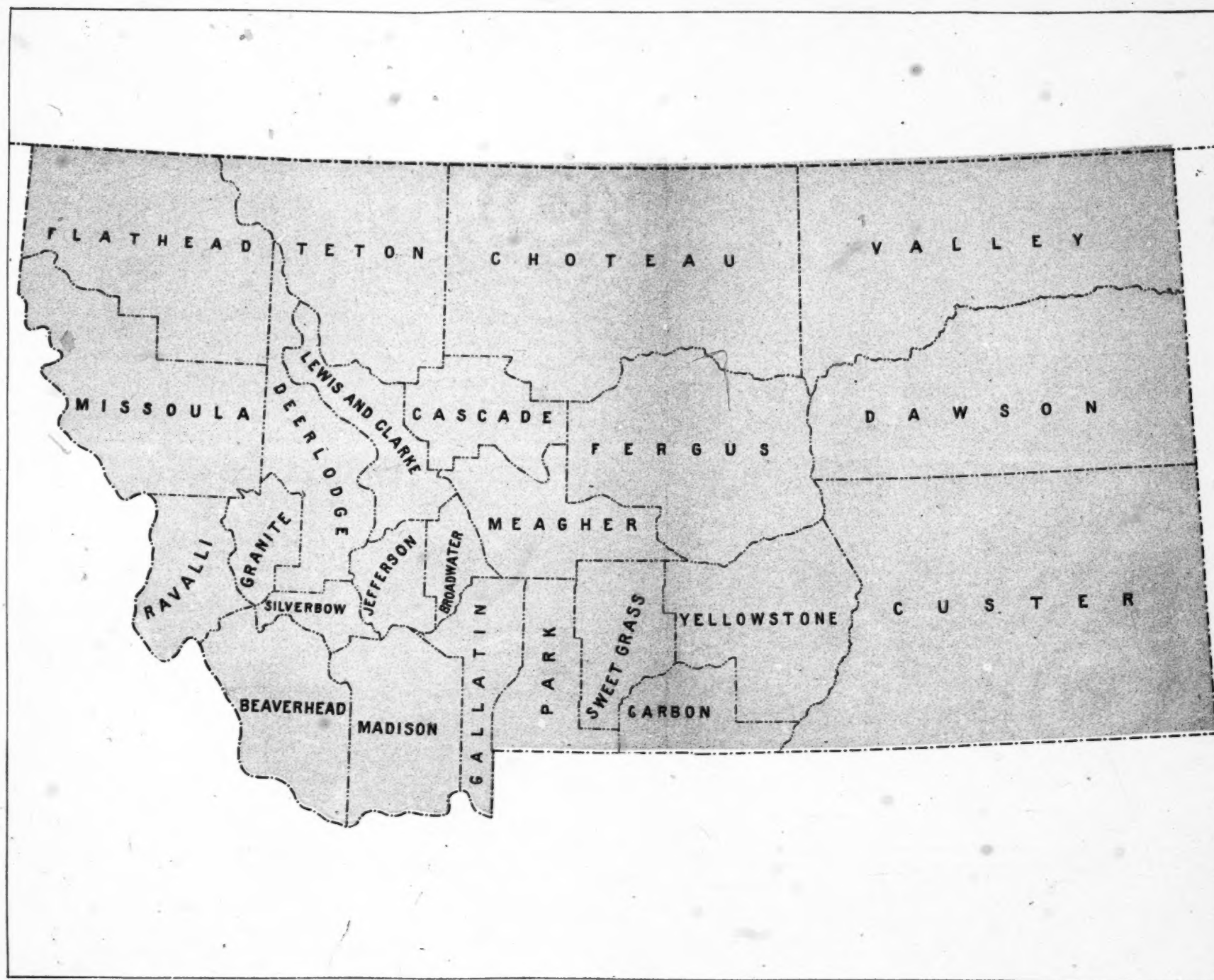
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Introductory.

In issuing the Sixth annual report of the Bureau of Agriculture, Labor and Industry, some attention was paid to the developed and undeveloped resources of the state, in descriptions that pointed out the opportunities that were afforded to the capitalist for the investment of his dollars where they would certainly be returned many fold, to the agriculturist seeking a free land location where through his personal endeavor he might establish a home and amply provide for those dependent upon him, and for the laborer, whether skilled or unskilled, who desired to better his condition, and anticipating a larger demand than had previously absorbed but several hundred copies, an edition of 18,000 copies was secured, and the entire number was exhausted in the course of a few months by the demand that followed a liberal announcement of its publication.

As a consequence of the more extended circulation of the report, the bureau was called upon to take care of a correspondence that reached into the thousands, most of the letters being from prospective immigrants of the several classes who had their attention attracted to the state by the report, and who desired to inquire personally as to particular conditions or opportunities. Aside from being in demand by agriculturists, laborers, merchants and those looking for industrial investment, the report received a large demand from eastern bankers, investors and brokers who recognize the state as one of the chief wealth producers of the future and who desired to become more familiar with its possibilities. As a result of the publication the state has acquired a large number of new settlers in the agricultural and stock regions, and the investment of considerable new capital in the development of the state's resources.

The appreciation of and the demand for that report has induced me to again set forth the resources, the natural advantages and the opportunities that Montana offers those who will accept them, and I will endeavor this time to have a sufficient number of copies on hand to provide all those who may desire to learn of the illimitable resources and advantages that lie waiting in Montana. There is no state in the union, there is no section in the world, that offers equal opportunities to either capital or labor or to the agriculturist, horticulturist or stock raiser that Montana does, and while there is money seeking certain industrial investment, while there are those seeking opportunity for work, those looking for agricultural homes, it is incumbent upon a state so liberally endowed with the gifts of a lavish Nature, to inform them.

Montana has made wonderful strides in development since it began its

advancement, but as yet the state has an abundance of almost every natural advantage to offer for the taking, the only exaction being made, that in possessing the advantages that nature has given, their development into remunerative industries follow.

That which must be of most interest to the stranger is a general knowledge of the state, and this is shortly given in the first article of the volume, and following it, to make the reader more familiar with the state as a mineral producer, though but the smallest fraction of its mineral area has been even prospected, there is an article on the mines and mining of the state, showing their production to be nearly 70 million dollars this year, and then the several counties have been given attention, and in the reading of these the inquirer will secure a better idea of the particular resources of the different portions of the state and of the development that has been accomplished.

Following these is an article on what has been accomplished in the way of irrigation, and another upon national irrigation, the last being included in the hope that it will aid in advancing a proposition that in its accomplishment will contribute more to the prosperity of the whole country, to providing homes for those who are being crowded out of the congested cities by reason of their inability to secure lucrative and permanent employment, to increasing the consumption of the finished products of the eastern manufacturer, to the sales of the wares of the merchant, to the securities offered for investment, than all of the national investments that have ever been made; and in making this investment that is so certain of ample and comprehensive return, it is proposed that the nation shall be fully reimbursed. The industries of the states are shown in tabular form, and a comparison with the statements of previous years shows that there is gratifying increase in every line.

Organized labor is one of the recognized institutions of the state and one of the factors of its unparalleled and universal prosperity. The directory of unions will show that every branch of industry is represented at every industrial center, and the schedules of wages will demonstrate that good wages and industrial prosperity may and should exist at the same time and in the same place.

The raising of cattle and sheep and the growing of wool, two of the most important industries of the state, Montana being the largest wool producer among the sheep growing states of the union, are considered at some length.

This report will be found to embrace a comprehensive line of local statistics, affording a recognized source from which desired data may be secured. The analysis of foods, showing adulterations in many of the articles of everyday consumption, will be of interest to every reader and a surprise to many, as it demonstrates to what extent the manufacturer of food stuffs is willing to injure the public health in order to add slightly to the profits of his institution.

One feature that will be of lasting interest and valuable for future reference, is the official precinct vote on the complete national, state and county tickets for 1900.

The natural advantages of Montana have existed since the days of the creation, and it is my belief that if Montana is to become a great state—and

there is every warrant for her becoming the greatest wealth-producer of the sisterhood of states and support the largest and the most prosperous and busiest population—the people of other states and of other countries who are seeking new locations, must be told of what this State has to offer, and the desire to learn of this State was amply demonstrated by the demand for the last report.



A MONTANA RANCH.

"The Treasure State" ❧

Its Treasures a Wonder,
Its Scenery Sublime,
Its Climate Perfection,
Its History a Romance,
Its Wealth a Surprise.

❧ ❧ ❧

Thou who wouldst see the lovely and the wild
Mingled in harmony on Nature's face,
Ascend our Rocky mountains. Let the foot
Fail not with weariness, for on their tops
The beauty and the majesty on earth,
Spread wide beneath, shall make thee to forget
The steep and toilsome way.

—Bryant.

And when *Sieur de la Verendrye* in 1742, and in 1805, when the explorers *Lewis and Clark* climbed to the lofty peaks of the Rockies, after this territory had been acquired from Napoleon, they had spread before their vision "the lovely and the wild;" surrounded by the towering monuments of Nature, they looked down into deep and picturesque valleys that widened as they lost themselves in the billows of the rolling foothills, and cut with the silver glint of many a stream and softened by the sheen of every water fall, the dreams of the poet were awakened.

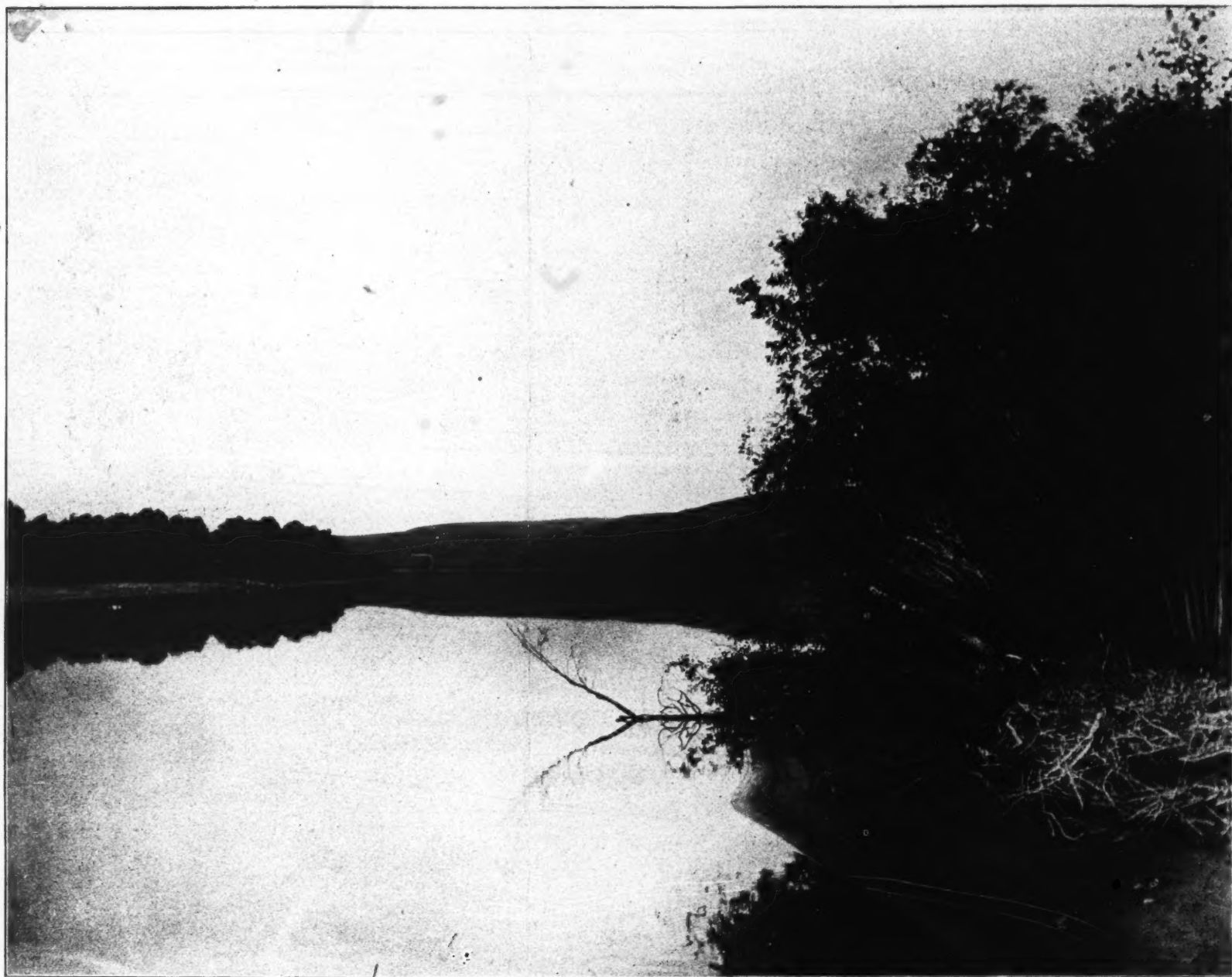
And when it came to the naming of the territory, its grand mountains christened the child and have since stood as silent sponsor, as well as bountiful patron, during the years that have followed and which have been marked with such unparalleled progress and prosperity—and the territory that was destined to be the brightest star of the constellation of states, was named "Montana," and forseeing the wealth that would flow from its hidden treasure, it was given the motto "*Oro y plata*"—gold and silver.

The credit and the manner of naming Montana has been variously claimed, but it is now accepted that this belongs to *Gen. J. W. Denver*, and came about in this way: When *Stephen A. Douglas* was preparing a bill for the admission of this part of the United States as a territory, he was at a loss for an appropriate name and called *Gen. J. W. Denver* to his assistance. As the general was a veteran of the Mexican war and familiar with many Spanish words, he at once replied to Senator Douglas' query—"Why not name it Montana? It is a Spanish word and means a mountainous country." Douglas' wife was one of the noted linguists of the capital, and doubting *Gen. Denver's* knowledge of the Spanish language, the word was referred to her and the translation was approved and the name endorsed. Thus satisfied, Senator Douglas said—"Governor, it is just the word and I will adopt it." The measure was prepared and "Montana" was incorporated in it as the name of the proposed new territory, but the bill failed to pass at that time, though it re-



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ON THE MISSOURI.

tained its name, and when the organization occurred in 1864, three years after the death of Senator Douglas, it was formally christened as he and Gen. Denver would have had it.

The act providing for the admission of Montana as a state, was passed by congress on February 22d, 1889, and was the result of the conscientious and efficient labor of Governor-elect J. K. Toole, who represented the state as its delegate in congress, and who had promised the people while making his campaign that if he was elected he would return from congress with the proclamation establishing Montana as a state and adding another star to the constellation of the American flag—and he fulfilled the promise. The act provid-



OF DAYS THAT HAVE PASSED.

ing for the admission of the state was signed by President Cleveland, and after it had been ratified by the people of the state at an election held on the first Tuesday of October of the same year, the formal proclamation was issued and signed by President Harrison on Nov. 8th, 1889.

Montana has a population of 243,329 and an area of 146,080 square miles, or 93,491,200 acres and 770 square miles of water surface, is included between latitude 45 and 49 north and longitude 104 and 116 west, and is bounded on the north by the Canadian provinces of Alberta and Assiniboia, on the east by the Dakotas, on the south by Wyoming and Idaho, and on the west by the latter state. The great area of the state can be better appreciated by giving its width north and south as 275 miles and its average length east and west 535 miles, and calling attention to the fact that it is the third largest of the states of the Union. While Montana is popularly known, and with the mil-

lions not well informed of our local topography, supposed to be entirely mountainous, less than one-third of its area is occupied by the Rocky Mountains and the lesser ranges and spurs, and the other two-thirds is about equally divided between range and agricultural lands, all being susceptible to the highest and most profitable cultivation when artificially watered. There are, however, large districts of the agricultural lands that are now and can be placed under profitable cultivation without irrigation, and many of the valleys, notably the Flathead valley and others of smaller area, have an abundant precipitation of moisture to insure a certain and luxuriant growth of the varied crops of the western farm. The arable lands of the state are greater than that of New York, Pennsylvania, Massachusetts, Connecticut, Rhode Island, New Hampshire, New Jersey, Maryland and Delaware, all combined, and from this fact the future possibilities of Montana as an agricultural state may be easily and safely prophesied. The extent of Montana can only be appreciated by comparisons. It is larger than Minnesota and Iowa combined; it is larger than New York and the six New England states, and is larger than England, Ireland, Scotland and Wales all put together—and all of its vast area can be made to produce a world of wealth. Its every mountain peak stands as a sentinel over rich mineral wealth; its rolling foothills pasture great herds of cattle and flocks of sheep, and its broad acres of fertile prairie can be made to provide homes for tens of thousands of agriculturists.

And with the supposition that the state is only mountainous, goes the impression that its altitude must be proportionately high, but it is a fact that over forty per cent of its area has an altitude of less than 5,000 feet above sea level, the greater part of the northeastern portion of the state below 3,000 feet and many of its valleys below 2,200 feet. But seven per cent of the area of the state has an altitude of 8,000 feet, nine per cent 7,000 feet, 14 per cent 6,000 and 21 per cent 5,000 feet. The average altitude of the state is below 3,900 feet, while that of Colorado is 7,000; Nevada, 5,600; Wyoming, 6,500. The same authority, that of Prof. Gannett of Hayden's survey, states that Montana has 51,600 square miles that lie below 4,000 feet, while Colorado has but 9,000 square miles with as low an altitude. And added to this great tract of moderately low altitude, Montana has 40,700 square miles that lie below 3,000 feet above sea level.

Aside from the mountain valleys of both sides of the main range, the lands of the lower altitude are embraced principally in Cascade, Teton, Fergus, Choteau, Yellowstone, Custer, Dawson and Valley counties, and the topography of these may be generally described as an undulating prairie, except in the parts of counties that lie near the mountains, where the foothills make a rougher and more broken surface and the frequent coulees afford egress for the many mountain streams that wend their way over the prairies and finally lose their waters in the Great Missouri. A portion of Teton county is mountainous and the southern part of Cascade county lies in the Belt range, but as these are rich in deposits of gold, silver, copper and other metals, the districts so occupied are reckoned by the counties as most valuable assets. The other counties of the state are mountainous, though there are in all of them broad valleys and basins that afford thousands of square miles of the most fertile soil and provide opportunities for the agriculturist and stockraiser that

can not be excelled by the most favored spots of any state. The prairie counties of the state have but little timber, but the mountainous counties have the greatest abundance, every hill and mountain-side being covered with

a heavy growth of a variety of commercial timber, pine, spruce and fir, predominating.

The main range of the Rocky mountains runs through the center of the western portion of the state, and from their snow-capped peaks and riven sides flow the thousands of streams that make it the best watered state of the mountain region, and which in the near future will provide the reservoir supply that will be made to water the state's thousands of square miles of fertile bench and prairie, and



ON A VACATION.

then pass on to do the same service for the semi-arid portions of the Dakotas. The general elevation of the range, at its crest, is not over 6,500 feet, but its lofty peaks reach heavenward from 8,000 to 12,500 feet, and at these higher elevations the snows of all ages have accumulated, and



EVERYDAY SCENERY.

those who make the tiresome climb, may look down through the clouds and the storms to the sunshine of the picturesque valleys below. The higher and more precipitous part of the Rockies is that embraced in Teton

county, in what is known as the Ceded Strip of the Blackfeet Indian reservation. This strip was purchased from the Indians a couple of years ago and opened to mineral location. The district had been examined previously by government mineralogical experts and they reported probable vast copper deposits, and on the strength of their report the district was purchased. Since the opening of this strip to location, claims have been located on two great parallel fissures that run from Divide mountain in a northwesterly course to Mt. Grinnell, both of which have very rich croppings, and are now under process of development. Beside the main range of the Rockies, there are many spurs and smaller ranges, the latter perhaps being better classed as isolated groups, as they are short and not of great height, and rise independently in the center of large level areas.

The largest and most important rivers of the state are the Missouri and the Yellowstone. The former finds its source in the united waters of the mountain streams of Madison, the most southerly county in the state, and thence wends an erratic course north to the center of Choteau county, within thirty miles of the Canadian border, when it turns and runs almost directly east to the eastern boundary of the state. The Yellowstone river has its source in a celebrated lake of that name located in the Yellowstone National park, and meanders through the state in a northeasterly direction, finally emptying its waters into the Missouri at Fort Buford, just across the eastern state line in North Dakota, and but fifty miles south of the Canadian line. Both of these rivers are navigable for hundreds of miles, and before the advent of transcontinental railways that afforded the more rapid transit, they took a prominent part in the development and commerce of the state. The record of the Missouri river steamboat will never fade from the earlier pages of the history of Montana. The Columbia river and its thousands of tributaries traverse the western part of the state, and a loop of the Kootenai, hundreds of miles in length, runs through the western part of the state. Added to these are many rivers of more or less importance and thousands of smaller mountain streams, each valley or gulch having its babbling brook that flows "on, and on, forever, ever." While Montana is not a state of lakes, still it has many a beautiful inland gem, the most prominent of which is Flathead lake in the northwestern quarter of the state. This lake is 27 miles in length and has an average width of 12 miles. It is surrounded first by a wide circle of the richest of agricultural lands, and this belt is one of the chief fruit districts of the state. Peaches, pears, apples and all the smaller fruits are raised here in the greatest abundance and finest quality, the valley claiming to have raised the largest apple on record. Mountains rise on every hand back of this horticultural belt, and these are rich in mineral wealth, and burdened with a heavy growth of timber. Both the lake and its chief tributary, the Flathead river, are navigable, and are important factors in the transportation of that section of the country.

Montana is grand and artistic in its scenery; it is incomparably rich in its mineral deposits; the soil of every hill and of every valley is abundantly prolific.

And added to all these lavish gifts of Nature, it has the most exhilarating and healthful climate and the greatest abundance of the purest water, and

numbers of thermal springs impregnated with many healing properties, murmuring an offering of healing to those who come from without the state bringing their infirmities with them. There are no fogs, no malaria in Montana, and contagious and infectious diseases are rare, and when manifested, prove to have come from the infection of less favored states, but here they yield readily to professional treatment, proving fatal in only the exceptional case. The winter season is not one of continued cold; when the frigid breezes of Canada are directed over the state, the thermometer will drop as low as



GOLD PLACER—GIANT NOZZLE AT WORK.

twenty degrees below zero, but these cold periods are infrequent and of short duration, as the prevailing winds of the winter are the soft chinook that quickly dissipates the snow and brings the balmy atmosphere of summer and the tinge of a pleasing autumn. And when a cold wave does sweep in from the east or north, it is not severely felt as the atmosphere at such times is almost entirely free from the chill of moisture, and one does not feel twenty below here as severely as zero and above is felt in the eastern states. Except upon the plains of the extreme eastern border of the state, the blizzard is unknown, and the cyclone and the tornado are not known. Great herds of cattle and flocks of sheep feed throughout the winter on every bench and plain, and these are given but little shelter, food or attention. The nourishing properties that remain in the grass and sustain the stock during the winter months is due to the fact that before the grass is ripened, the chinook winds cure it, turning it into standing hay, instead of having the frost drive the nutriment into the roots, leaving dead and substanceless straw. This, with the salubrity of the climate, is the secret of the success of Montana's stock ranges. The snow fall is light except in the midst of the mountain ranges and at the higher

altitudes, the greater part of the state seldom receiving a precipitation of snow of more than two or three inches at a time. The winters are capricious, but they are sunlit, warm and inviting, and the occasional cold snap but adds vigor to the universal energy of the people. Spring, summer, autumn and winter are all enjoyable and healthful seasons. In midsummer when the sun is over head, the temperature reaches an uncomfortable point, but as the sun dips behind the mountains, the cooling air of the Rockies displaces the heated air of the day, leaving the evenings and nights delightfully restful and refreshing. There has never been a case of prostration from heat in the state. While Montana does not advertise itself as a health resort, as its people are too busily and profitably engaged in their several occupations, and personally too healthy to revert to the subject, yet it has every climatic and natural condition that can contribute to the restoration of broken health. It is a land of varied altitude, of perpetual sunshine, of the purest air and water, and when these are combined to influence the recuperation of the invalid, convalescence is both sure and speedy.

The following analysis of a sample of mountain water is satisfactory testimony as to their purity:

"Reported in Mgs. per Litre—Parts in 1,000,000.

No.	AMMONIA		CHLORINE	TOTAL SOLIDS	NITROGEN AS NITRATES	NITROGEN AS NITRITES
	FREE	ALB.				
211	.02	.02	.00	406.00	.00	.00"

This water is remarkably pure, and there being in a million parts but two-hundredths of 1 per cent of free ammonia and albuminoid ammonia, is evidence of its healthfulness.

"Free Ammonia—This constituent results from the decomposition of nitrogenous animal and vegetable matter, and exists in the water in the form of a salt ammonium, from which the ammonia is easily set free. The test for ammonia is very delicate, the presence of one part of ammonia in 100-million parts of water being readily detected."

"This constituent and the following one, are regarded by most chemists as the most important upon which to base an estimate of the potability (drink value) of waters.

"Albuminoid Ammonia—This represents the nitrogen present in the water in the form of nitrogenous animal and vegetable matter in a more or less advanced state of decay. The nitrogen is liberated from these compounds in the form of ammonia by the action of an alkaline solution of potassium permanganate.

"Nitrogen in Nitrates and Nitrites—The presence of nitrates and nitrites indicates a contamination which occurred sufficiently long ago to allow the organic matter, particularly the nitrogen, as indicated by the test, to become oxidized. The nitrates represent a more complete oxidation than the nitrites, and, under similar conditions, a more remote source of contamination."

Taking the state as a whole, Montana has a greater variety of resources—the lavish gifts of a liberal Nature—than any other state in the Union, and each of these resources is abundant and free to those who will exert their

energy in making them productive of the greatest and safest returns. Montana offers unlimited and varied opportunities to the capitalist who desires to invest his money in lines that hold out as an inducement the largest profits and involve the minimum of risk; but as well, Montana offers homes to thousands—offers them homes on the most fertile prairie, bench and valley, where little capital and a willingness to work will soon establish a home of permanent and constantly increasing prosperity. In Montana the miner and prospector can find mineral in the greatest variety and abundance; the lumberman can find great belts of the finest timber; the farmer broad acres of the most fertile soil, and the manufacturer abundant water power, and of all this abundance of Nature, one may have for the asking.

Montana is young in the period of her active development, and now has a population of but 243,329, but it is increasing the number of its inhabitants every day, and the per capita production of wealth exceeds by far that of every state or part of state, and a familiarity with its illimitable resources forces the conclusion that the near future will see it one of the greatest and wealthiest states of the Union.

And though one need look back but a few years to review the period of frontier experiences, the perspective of that epoch has been reached in one rapid stride, and the memories of those picturesque days have passed into the



A MOUNTAIN STREAM.

shadows of the retreating past, and taking their places in the busy activity of the day. In that one rapid stride of progress toward material advancement, cities have been built, counties have been settled, great mines have been discovered, prospected and developed, the largest mineral reduction and refining plants in the world have been established, a multitude of industries have been put in operation, farms have been established along the banks of every river and stream and on the bench lands, semi-arid districts have been made wonderfully productive with the waters of many a mountain stream, and prairie and hillside have been covered with flocks and herds—all pouring out a vast addition to the wealth of the world and bringing to the many hands that produced it, the comforts and advantages that prosperity insures. And now instead of the quiet solemnity and picturesque grandeur of the gulch that in-

spired the poet's fancy, there is nestled a busy city, and as the shadows of night are cast by towering mountains, the scintillating shafts of arc and incandescent light illumine the attractive scene, outlining magnificent modern structures, displaying the handsome interior of business houses that provide a particular public with everything that need and cultured fancy can desire, so that now, amid the rush of busy streets, the whirl of the electric car, the whistle of the factory, the smelter, mill and mine, and in the glare of electrical brilliancy, one is suddenly brought to a realization that now indeed there is no frontier; that what was, is past; that what is, is the busiest of life hustling amidst every modern facility for the rapid and economical adjustment of natural resources to the approved methods of production, and that in the activities of creating and accumulating wealth, its people have not neglected education or culture, but have established state and local educational institutions that will compare favorably with those of the oldest states, and they have erected edifices for these that would be a credit to any state or city.

Though there are many fertile horticultural and agricultural valleys in all of these, the mountain ranges pass through and occupy a good portion of Flathead, Teton, Missoula, Deer Lodge, Lewis and Clarke, Cascade, Ravalli, Beaverhead, Madison, Silver Bow, Jefferson, Granite, Broadwater, Meagher, Park, Carbon and Fergus counties, and in these are embraced the mining districts of the state, and they present the opportunities for those who desire to engage in mineral discovery and development. A large part of Cascade, Teton and Fergus counties extend from the mountains over the foothills and prairies, and this portion of them is confined to agriculture and stockraising. The Rocky mountains lie along the western portion of Teton county and embrace some of the richest mineral districts in the state. The southern part of Cascade county is occupied by the Belt range, and these are also rich in minerals. There are short ranges in Fergus county called the Judith and Snowy mountains, and these are rich in low grade gold ore that since the advent of the cyanide process has proved to be workable at a great profit, and in consequence, during the past several years, a number of properties have been opened and some large plants of this kind have been established and are being profitably worked.

All valuable mineral deposits in lands, both surveyed and unsurveyed, are free and open to exploration, location and purchase, and a citizen may locate one or more claims upon veins or lodes of quartz or other rock in place bearing gold, silver, copper, lead, tin, or other valuable mineral deposits. A quartz claim is six hundred feet wide, measuring 300 feet each way from the center of the lead, and is 1,500 feet in length along the lead, with the right to follow the dip of the lead outside of the side lines of the claim. The laws require that on making a discovery of a mineral lead or ledge, the locator shall open a cut or sink a shaft at least ten feet in depth or run a tunnel of the same length that will reveal the lead and at least one wall. Here he must post a notice of location and run the lines of his claim, setting stakes at each corner and on the sides, and must within ninety days record the notice of location at the office of the clerk and recorder in the county in which the claim is located. The location work done will hold title to the claim to the end of the calendar year, and thereafter one hundred dollar's worth of representation

work must be done on the claim during each calendar year for a period of five years, when application for a patent may be made. Affidavits of the representation work must be made each year and recorded in the county clerk's office. If a patent is desired before the expiration of the five years, the claim owner may at any time complete the representation work allotted for the

full period—\$500 worth—and secure his patent through application to the local land office, having the claim surveyed by a deputy surveyor, paying the land office the required fees and the payment to the government of five dollars per acre, or \$100 for the twenty acres embraced in the claim. The cash



IN THE OAT FIELD.

cost from the date of locating the claim to the receipt of a patent, aside from the annual representation work, will be about as follows: Notary acknowledgment of the location notice, \$1.00; recording of the notice, \$2.00; recording and acknowledgment of the annual affidavits of representation for five years, \$10.00; filing application for patent with the local land office, \$10.00; publication of application for patent (estimated), \$15.00; fees of the surveyor general's office, \$30.00; payment to the surveyor for making the survey (estimated), \$40.00; payment to the government at \$5 per acre, \$100.00, a total cash expense during the five year period of \$208.00. One person may

take any number of quartz claims, and each one is subject to the same annual representation work, but in the stated costs for finally securing a patent there is a considerable reduction per claim in several of the items given. Where there are several contiguous claims with a community of interests, the representa-



A MONTANA WHEAT FIELD.

tion work for the group may be done by one tunnel or shaft that is constructed for the development of the whole, and while this does not lessen the

cost of representation per claim, it allows the work to be done in one place and in this way accomplish actual development of the lead and takes the place to the extent of the representation, of the development expense that would have to be incurred under any circumstances.

In locating a gold or rock placer, 20 acres may be taken and the same representation is exacted and the same expenses incurred, except that in application for a patent the payment to the government for the land is but \$2.50 per acre. An association of eight persons may locate a placer of 160 acres, and in this case but \$100 worth of work is required to represent the entire claim for each year.

Coal may be located in 160-acre tracts and the law requires that coal shall have been discovered in place on the tract. It costs \$3.00 to file a declaratory statement, and this with the discovery work done, will hold the title to the land for fourteen months, at the expiration of which time the locator must make application for patent in the same manner as prescribed for quartz claims, and pay the government for the land either \$10.00 or \$20.00 per acre, the greater price being charged for coal lands within railroad limits, and the lesser price for such lands as lie without the railway limits.

All unlocated mineral lands are open to the prospector.

While there are thousands of square miles of the finest agricultural lands embraced in the valleys of every county that we have here classed as mountainous and mineral, the counties of Cascade, Carbon and Teton, aside from their mountain and mineral portions, and Fergus, Choctaw, Valley, Dawson, Custer, Yellowstone and Sweet Grass, may be classed as agricultural. Though there are large areas in these counties that may be rated as semi-arid, yet there are thousands of square miles that receive an abundant precipitation of moisture, particularly in Cascade, Gallatin, Teton, Fergus and Sweet Grass counties, much of their lands bordering the foothills of the mountain ranges. The other agricultural lands, with the exception of those of the low river bottoms whose subsoil is moistened continually with the waters of the river, require irrigation, but when placed under water produce with wonderful and unfailing abundance. As an inducement to the reclamation and settlement of these lands, congress in 1894 passed the Cary desert land act, giving the state title to one million acres of land, title to pass when the state shall have reclaimed the lands. In 1895 the state legislature accepted the offer of the general government made under this act, and the following session of the local assembly passed an arid land act creating an irrigation commission, authorizing it to issue bonds for the purpose of accomplishing the work of reclamation of the lands, and commendable progress has been made under its auspices. Now, however, an effort has become general to secure the aid of the general government in the erection of reservoirs along the mountain ranges for the purpose of conserving the waters of the early spring and the rainy seasons, and to construct main canals through the foothill districts leading to the arable areas, and there is every indication that this will be accomplished. Until within the past three or four years, irrigation has been confined to diverting water from the rivers and lesser streams over the contiguous bottom lands, but there are now a number of canals that water considerable districts of the higher lands. The more prominent of these canals

are the Minnesota & Montana Land Improvement Company's canal in the vicinity of Billings; the Crown Butte, with water taken out of Sun river west of Great Falls; the Dearborn canal, in Lewis and Clarke county, one of the first canals of any importance in the state; the Cascade Land Company's canal, north of Great Falls; the Miles City canal, in the neighborhood of the city of that name; the Manhattan canal, in the Gallatin valley; the West Gallatin canal, also in Gallatin county; the Bitter Root canal, in Ravalli county, and the Conrad Brothers' canal, in Teton county. The aggregate land irrigated by these canals is estimated at over 250,000 acres. In past years there has

been very little land fenced; but of late years the farmers have been inclosing their holdings. The foothills and high ranges, however, are yet and always will remain open and free for the stock of every farmer and rancher to range upon. The products of the farm are the same as those of the middle states, but the yield, especially in the cereals, is much more abundant. Grasses grow luxuriantly and the yield of hay from irrigated lands is enormous. The more common crops are wheat, oats, barley, rye and buckwheat. Flax is a sure and abundant crop, but there is little home demand for it, and as the market is so distant, little attention has been given to its culture. This will not become an important



OUR WATER SUPPLY.

product of the farm until a linseed mill is established to consume the the product. There is an exceptional opening for the profitable investment of capital in a Montana linseed oil mill. Vegetable and root crops are abundant, and in the southern valleys on both sides of the main range the larger and smaller fruits are grown in the greatest abundance. In Missoula, Flathead and Ravalli counties, fruit growing is nearing the front rank of importance, the apples, plums, peaches, cherries, strawberries, etc., of these districts being noted for their excellence of flavor and preservative qualities.

A special advantage to all the agricultural interests of Montana is that the home demand for farm products of every nature far exceeds the supply, insuring a cash market and high prices. As the greater part of the population of the state will be for all time occupied in mining and attendant indus-

tries, the conditions of the market for agricultural products, as noted, will always remain.

There are several ways in which the intending settler may obtain lands:

By locating on public lands in the districts mentioned where irrigation is not necessary.

By locating on public lands that require irrigation, but so located that a water appropriation may be made and the water diverted without incurring too great an investment.

By leasing or purchasing lands that are embraced in private canal systems.

By purchasing improved lands carrying water rights.

A brief synopsis of the laws governing the location of lands may be of interest to the investigator of Montana's agricultural advantages, and is as follows:

A homestead may be secured by any person who is the head of a family, or who has arrived at the age of twenty-one years, and is a citizen of the United States, or has filed his declaration of intention to become such, and who is not the proprietor of more than 160 acres of land in any state or territory, is entitled to one-quarter section (160 acres), or less quantity of unappropriated public land, under the homestead laws. The applicant must make affidavit that he is entitled to the privileges of the homestead act, and that the entry is made for his exclusive use and benefit, and for actual settlement and cultivation, and must pay the legal fee and that part of the commissions required, as follows: Fee for 160 acres, \$10; commission, \$4 to \$12; fee for 80 acres, \$5; commission, \$2 to \$6. Within six months from date of entry the settler must take up his residence upon the land, and reside thereupon and cultivate the same for five years continuously. At the expiration of this period, or within two years thereafter, proof of residence and cultivation must be established by four witnesses. The proof of settlement with the certificate of the Register of the Land Office is forwarded to the General Land Office at Washington, from which patent is issued. Final proof cannot be made until the expiration of five years from date of settlement, and must be made within seven years. The government recognizes no sale of a homestead claim. After the expiration of 14 months from date of entry the law allows the homesteader to secure title to the tract, if so desired, by paying for it in cash and making proof of settlement, residence and cultivation for that period. The law allows only one homestead privilege to any one person, but under act of March 2, 1889, section 2 provides in certain cases, when the first homestead was necessarily abandoned, that a second homestead may be made.

An unmarried woman, of age, can take the benefit of the homestead law. If she marries before she has acquired the title, and continues her residence on her claim, she can proceed to prove up at the proper time, the same as if she had remained single, but husband and wife cannot secure separate tracts by maintaining separate residence at the same time. All the sons and daughters of a family, who are of age, are entitled to take up land under the United States land laws.

A soldier who has served in the army or navy during the War of the Rebellion for over 90 days, can obtain 160 acres of any of the public lands by



SCENES ON THE ROUNDUP.



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THE SCENERY OF MONTANA.

filing (himself or by an attorney) a declaratory statement, and within six months thereafter filing his affidavit and application, commencing settlement and cultivation, and continuing the same for five years, less that time he served in the army or navy, but such time in no case to exceed four years. His widow can take advantage of the above. In case of his death in the army, or discharge therefrom on account of wounds or disability incurred in the line of duty, the term of his enlistment is deducted. In case of the death of the soldier, his widow, if unmarried, or in case of her death or marriage, then his minor orphan children, by a guardian duly appointed and officially credited at



SECURING GOLD WITH A "ROCKER."

the Department of the Interior, shall be entitled to all the benefits given to soldiers under the homestead laws.

Under the desert land act, any citizen of the United States, or persons who have declared their intention to become such, and who are also residents of the state or territory in which the land sought is situated, may file a declaration, under oath, with the Register and Receiver of the land district in which any desert land is situated, that he intends to reclaim a tract of desert land, not exceeding 320 acres, by conducting water upon the same, within four years. At the time of filing this declaration a fee of 25 cents for each acre of land proposed to be so reclaimed must be paid.

At the time of making the declaration the land taken up under this act must be particularly described, if surveyed, or, if unsurveyed, must be described as nearly as possible. The party shall also file a map of said land, which shall exhibit a plan showing the mode of contemplated irrigation, and which plan shall be sufficient to thoroughly irrigate and reclaim said land and prepare it to raise ordinary agricultural crops, and shall also show the source of the

water to be used for irrigation and reclamation. At any time within four years, upon making satisfactory proof to the Register and Receiver of the reclamation of said land, and the expenditure thereon for improvements of \$1 an acre each year for three years, and proof of the cultivation of one-eighth of the land, and upon the payment of the additional sum of \$1 per acre, a patent shall be issued. A claimant must also file with the Register during each of said three years proof by the affidavits of two or more credible witnesses that he has made such expenditures. He may, however, prove up earlier whenever he can make the required proof of reclamation, cultivation and expenditure to the aggregate of \$3 per acre. All lands, exclusive of timber and mineral lands, which will not, without irrigation, produce some agricultural crop, are deemed desert lands. Residence on the land is not required.

Under the timber and stone act, any citizen of the United States, or one who has declared his intention to become such, can acquire not to exceed 160 acres; land must be chiefly valuable for timber or stone, containing no valuable deposits of gold, silver, copper, coal or cinnabar. Applicant is required to file sworn statement with Register and Receiver that he has made no prior application; to designate the tract required by legal subdivisions, setting forth its character as above, and that it is for applicant's own use and benefit. Such application will be published sixty (60) days when the applicant files further proof of the character of the land, paying \$2.50 per acre therefor. Married women can purchase in Montana.

There are United States land offices at Miles City, Custer county; at Lewistown, Fergus county; at Bozeman, Gallatin county; at Helena, Lewis and Clarke county, at Missoula, Missoula county, and at Kalispell, Flathead county. The homestead affidavits can be made before the clerk of the District Court at any county seat, or before any United States Commissioner in the state, and the journey to the land office be saved.

There are over twelve million acres of timber lands in the state, not counting the smaller disconnected bodies and the lesser belts that fringe the several streams. The forests that contain timber that is of commercial value are in the mountainous mineral districts. Nature appreciated the necessity of an abundance of heavy timber in all mining operations and placed it in greatest plenty and finest quality about every point of consumption. Aside from the valleys, all the counties lying along the Rocky mountains and west of the ranges, are heavily timbered.

The fuel supply of the state is more than abundant, the coal measures being the most extensive in the west. Beds of an excellent quality of bituminous coal have been developed in nineteen of the twenty-four counties of the state. In several of the counties, notably Cascade, Carbon, Park and Gallatin, very extensive mines have been worked for some years and others are being continually opened, and there are extensive coal measures in Teton, Choteau and Fergus counties that have not as yet been more than prospected to ascertain their extent in a general way. It is estimated that in the coal fields of Cascade county, where there are several large coal camps turning out hundreds of car loads of coal every day, that the average yield to the square mile is six million tons. As there are thousands of square miles of

coal lands in the state it is apparent that scarcity of either domestic or commercial fuel will not be a question that will bother this or the next generation.

The first discovery of gold in Montana was made in what is now Deer Lodge county, in 1852. The creek upon which the precious metal was discovered was named Gold creek, and bears that name now. Six years later other gold discoveries were made in the same neighborhood by the Granville Stuart party. In 1862 the Stuart-Anderson party developed placer claims near the present location of the town of Pioneer. The rich returns of their mines was really the incentive to further prospecting, discovery and the de-



LAKE COMO, RAVALLI COUNTY.

velopment of the mines of Montana. Following the opening of the Pioneer placer claims, came the discovery of rich ground at Bannack, Alder, Ophir, Last Chance, now the location of the city of Helena, Confederate, Pilgrim Bar, Silver Bow, Bear, Elk, Cave, Lincoln, Cedar Creek, and several hundred other places, all of which produced lavishly of the coveted metal, and in the course of a few years added hundreds of millions of dollars to the gold supply of the world. During this period of placer mining, discoveries of the other metals that are abundant in the mineral districts were made, but there was little development of the deposits until the advent of transportation facilities. Allen & Arnold are credited with reducing the first gold quartz in Montana in a mill erected at Bannack, Beaverhead county, in 1862-3. It was "home-made," the lumber and iron being obtained from dismantled wagons that had been brought "across the plains." It had six stamps, of 400 pounds each, and was successfully run by water on free ores from the Monitor lode. The first clean-up was made in October, 1864. The first steam quartz mill, 12 stamps,

was built and operated at Summit, at the head of Alder gulch, Madison county by the Idaho Mining Company, commencing operations December 28, 1865. The first quartz mill was established at the present location of the town of Philipsburg, in 1867, and the first successful silver smelter was erected at Argenta during the same year. There were too many obstacles to overcome, however, and the silver industry did not become of any importance until 1876, when the recorded output was \$1,132,976, and the annual production did not reach the two-million figure until 1879, but after that year there was a steady and rapid increase until the output in 1892 was \$22,432,323. The production of silver for 1899 was 16,850,754.85 ounces, and at a coinage value worth \$21,786,834.52, but at the market value, which has been the only value since it has been deprived of a monetary value, was somewhat less than half of that figure. The production of silver is now almost wholly a by-product of other metals, such as gold, copper and lead.

The first discovery of copper was made in 1864, by two prospectors who were in search of gold in the vicinity of the present "Greatest Copper Camp on Earth"—Butte. The first practical development of a copper prospect was made in 1866, in the same locality, a shaft being sunk on what is now the Parrot mine, and during the fall of the same year, a furnace was established. The wealth of the copper deposits at Butte was first recognized officially by United States Commissioner of Mining and Statistics Raymond, in his report of 1870. From this date to the present time the development of the copper deposits has been rapid, and at this writing the state contains not only the richest copper mines in the world, but also the largest and most modern reduction plants, employing thousands of men and turning out millions of dollars' worth of refined copper annually.

And notwithstanding the great mineral production of the state as shown by tabulated statements that appear on other pages of this volume, the mineral development, and even the mineral prospecting of the state has scarcely commenced. Only a few years ago it was generally believed that the Butte district contained the only valuable deposits of copper, but within the past several years copper has been found in a dozen other districts of the state, and their present development warrants the assertion that all of them will prove to be rich in the profitable metal. This may also be said of gold, silver and lead. And it must be borne in mind that while the mineral belt of Montana reaches from the southeast corner of Carbon to the northwest corner of Flathead county, spreading over very nearly one-half of the state, that but little of this great area has been even superficially prospected.

The state financially is on a cash basis, having no stated outstanding indebtedness, and on the date of this publication had over half a million dollars in its different funds, the distribution of which may be seen in the detailed statement of the treasury department, in the statistical pages of this volume, where also may be found the sources of the state's income. All warrants have been called up to date. The permanent school fund has \$340,495, of which \$119,417 is in cash, and the balance is invested in interest-bearing securities. The reader may search the reports of every other state, but he will not find another with as good financial standing and condition.

There is no state in this Union; there is no country in any continent, that

presents so inviting a field for everybody of whatever calling, for the investment of capital or of energy, or of both. Attention has been called in a general way to its multiplicity of resources, and now if the reader desires, he will find these more specifically mentioned in connection with the particular localities in which they are located.

MONTANA'S RAILWAYS.

For a mountainous state, and one that has been going through the process of active development for such a short period, Montana is well provided with railway facilities. The Northern Pacific is the pioneer line and traverses the center of the southern part of the state from east to west, and has fifteen



A MOUNTAIN PLACER FLUME.

branches that extend north and south into different portions of the state, all heavy feeders for the trunk line. The more important of these branches are the Rocky Fork line, that runs from Laurel to Red Lodge, with a spur to Gebo from Willets, traffic for the branches being furnished by the extensive coal mines of these towns; the Cokedale branch, that runs from the main line a short distance to the coal mines and coke ovens of Cokedale; the Red Mountain, that connects the rich mines of Rimini with the main line at Helena; the Boulder branch that runs south from Helena to Boulder, the county seat of Jefferson county, tapping the rich and highly cultivated Boulder valley, and furnishing transportation for the wood that is taken from the neighboring mountain sides and marketed in the smelter towns and other cities of this part of the state, and an extension runs from Boulder to Elkhorn. The branch that connects the Yellowstone National Park with the main line runs from Livingston to Gardner, at the northern line of the park. The Butte line is

a branch of the Northern Pacific that runs from Butte to Logan, and the Gaylord and Ruby Valley line, that runs from Whitehall to Gaylord, a smelter town. The Red Butte runs from Sappington to Norris and then to Pony. The Marysville line branches from the main line at Clough Junction and runs to Marysville, and the Philipsburg line runs from Drummond to Philipsburg. The Bitter Root branch starts from Missoula and traverses the fertile valley of that name as far as Grantsdale, making one of the most productive sections of Montana tributary to the Northern Pacific. Another important branch of this line is the Coeur d'Alene line, that also extends from Missoula, running in a northwesterly direction to Spokane. The last branch of this line is the Montana Union, that runs from Butte to Garrison.

The main line of the Great Northern traverses the northern part of the state east and west for its entire length, and its most important branch is the Montana Central, which leaves the main line at Havre and runs southwest to Great Falls, and thence in the same direction to Helena and Butte. Branching from Great Falls, the road has lines running to the coal camps of Sand Coulee, Stockett and Belt, and to Neihart, the great silver camp, and to Baker.

The Oregon Short Line runs from Ogden, Utah, north through the southwestern part of the state to Butte, connecting the state with the Union Pacific system.

The Great Falls & Canada runs from Lethbridge, Alberta, Canada, south to Great Falls, traversing a large stock country and connecting the railway systems of the state with the Galt coal mines at Lethbridge.

The Butte, Anaconda & Pacific runs from Anaconda to Butte, and while it is a short line it can show up more tonnage to the mile the year around than any other railroad in the country. It hauls the raw material to and the finished product from the Anaconda copper smelters.

The Montana railway runs from Lombard in Gallatin county, to Lead-boro, where there are rich silver-lead mines, and on into the grazing and farming sections in Meagher county, the temporary terminus now being Merino, or Harlowton, the railroad name. This line will no doubt soon be extended to Billings.

The Big Horn Southern runs south from Billings, connecting with the Burlington & Missouri River system.

The Yellowstone Park railway is now under construction. This line will run from Bozeman east over the mountains to the coal mines near Chestnut, and south from Bozeman to the National Park, opening up an entirely new mineral, timber and agricultural district.

Mines and Minerals of Montana.

The State is a Mineral World in Which Almost Every Mineral is Found in Abundance—Now Produces 23 1-3 Per Cent of the Copper of the World and 61 Per Cent of the Copper of the United States—Its Gold, Silver and Lead Product—Other Metals—Great Operating Coal Mines.

When one studies the present mineral product of Montana and then considers that many of its minerals are not being produced at all as yet, and that but the smaller fraction of the mineral districts of the state are developed and producing, it can not be wondered that the state has come to be termed "The Treasure State," and that the name has come to be accepted as the assertion of fact. One-half of the area of the state may be classed as mineral, and it is safe to say that there is not one-half of one per cent of the mineral acreage containing valuable deposits of mineral, that is now being worked. New mines and new districts are constantly being developed, however, and the next decade will witness an increase in the mineral production of Montana that will eclipse the record of any mineral location on earth.

And in considering its great mineral deposits, their variety and easy accessibility, the important fact that the mineral districts have the most abundant timber supply, that beneath the benches of the foothills are hundreds of thousands of acres of the best furnace and coking coal, and last, but perhaps the most profitable of all in the elements of mineral production and reduction is the wonderful abundance of cheaply utilized water power. These water powers range from that afforded by the rapid fall of the mountain stream to the great volume of the mighty Missouri as it falls over the precipitous cascades of Great Falls. The initial water power at Great Falls is 350,000 horse power, and all of this can be utilized with a comparatively small investment of capital. Canyon Ferry, a short distance east of Helena, has an extensive water power, and there are others in the state of considerable proportions. But aside from these large powers, there are innumerable mountain streams in every mining district that are conveniently placed and afford from a few hundred to five-thousand horse power, and while the larger powers will, as they are proving in Great Falls, be the cause of building large mineral reduction cities that will be founded on the milling and smelting plants that will be attracted by the opportunity to secure any desired power and electric current, as the mineral districts are developed, these water powers will be utilized and will materially aid in the net profits of the institutions employing them.

It is not the intention in this article to devote any considerable space to the separate mining districts or cities of the State, as these will be treated separately and more satisfactorily to the reader in articles devoted to each. The reader, however, must not miss the articles on Great Falls, where the largest available water power of the continent is located and where they have one of the most extensive and modern copper reduction and refining plants of the world, a great silver reduction plant and many other similar attractions. And then there is Butte, "The Greatest Copper Camp on Earth," that



PANNING THE GRAVEL.

is fully entitled to the name as well as the reputation, for the mines there come very nearly producing a quarter of the copper of the world, and Anaconda with its greater reduction and refining works, and there are smaller but important mineral districts and towns, and these will have special attention called to them on other pages of this volume.

In 1899, Montana produced in values of gold, silver, copper and lead, \$68,457,307.54, an increase of over seventeen million dollars over the previous

year. The copper product of the world for 1899 was 468,463 long tons, or 1,049,357,120 pounds, and of this the United States produced 386,410,356 pounds, which is thirty-seven per cent of the entire product. Of this copper Montana produced 245,602,314 pounds, or 23 1-3 per cent of the copper product of the world and 61 per cent of the copper of this country. It must be borne in mind, however, that the mineral development of Montana is only in its infancy, and that the development of the future will be much more rapid than that of the past, and that the present mineral output of the state, though reaching away past a half a hundred million dollars in value, will be but a bagatelle of the output of the future, and that in not a very distant future either.

Hon. Eugene B. Braden, who was assayer in charge of the United States Assay office in this city during and previous to the fiscal year 1899, says the value of the precious metals won by the washing and milling and smelting of the ores and gravel mined in Montana during the year, was not only the largest in its history, but that the increase was a very considerable item.

The following tables give the quantity and the value of each of the metals, gold and silver being based on their coinage value, and copper and lead on the average quotation for the year.

Description	Quantity.	Value.
Gold, fine ounces	233,126.717	\$4,819,156.95
Silver, fine ounces (coinage rate)	16,860,764.85	21,786,834.62
Copper, fine pounds, at \$15.67 per hundredweight	245,602,314	40,941,905.74
Lead, fine pounds, at \$4.47 per hundredweight	20,344,750	909,410.33
Total		\$68,457,307.54

A comparison of these figures with corresponding data for 1898 shows variations as follows:

Metals.	1898.		1899.		Increase.
	Quantity.	Value	Quantity.	Value.	
Gold, fine ozs ..	253,867.787	\$5,247,912.91	233,126.717	\$4,819,156.95	* \$428,756.96
Silver, fine ozs ..	14,818,961.98	19,159,432.17	16,860,764.85	21,786,834.62	2,627,362.35
Copper, fine ozs ..	216,979,404	26,102,616.29	245,602,314	40,941,905.74	14,839,289.45
Lead, fine ozs. ...	21,403,592	909,055.78	20,344,750	909,410.33	100,354.55
Total		\$51,319,067.15		\$68,457,307.54	\$17,138,240.39

* Decrease.

The above is a gain of more than 33 1-3 per cent in the value of the production over the year 1898. Except that of copper the several changes in value noted above are those naturally attendant upon the mining industry. Owing to general industrial activity in 1899 and the consequent heavy demand for copper the high price that prevailed at the opening of the year was maintained throughout. This fact, together with the increase of nearly 28,500,000 pounds in the production of the metal itself, explains the enormous gain of nearly \$15,000,000 in value of this metal alone.

The price above quoted for 1899 is that of electrolytic copper. The

Montana product is of this kind. In former years this quotation was not obtainable, and, necessarily, in computing the value of the Montana output the selling price for "lake copper" was used. This is higher than the price for electrolytic copper, and had it been used in arriving at the value of the Montana copper in 1899 the gain would have been more than \$18,000,000 over 1898. This latter figure, therefore, more nearly represents the actual value of the increase in copper during the year.

The amounts of gold taken from placers and originating in milling, cyaniding, copper, lead, and smelting ores during 1899, when compared with those of the previous year, were as follows:

Classed as—	1898.		1899.		Increase or Decrease.
	Fine Ozs.	Value.	Fine Ozs.	Value.	
Placer bullion	31,662.452	\$654,530.97	28,827.617	\$596,919.73	*\$58,601.24
Mill bullion	80,590.965	\$1,665,963.10	64,070.159	1,324,447.73	*\$341,515.37
Cyanides	19,235.190	397,636.46	38,247.583	790,647.71	**\$393,011.25
From copper ores . . .	51,408.020	1,062,698.09	55,706.317	1,151,551.77	**\$88,853.68
From lead ores	8,309.027	173,003.14	7,815.539	161,561.53	*\$11,441.61
In smelting ores . . .	62,902.143	1,294,101.15	38,459.502	795,028.48	*\$499,072.67
Total	253,967.787	\$5,247,912.91	233,126.717	\$4,819,156.96	.....

* Decrease.

** Increase.

It will be noted that the most attractive features in the production of gold in Montana during 1899 were furnished in the mining of copper ores and in the results achieved by the cyanide process. Since the employment of this process in the winning of gold from tailings and low-grade ores on a profitable basis in Montana, the annual returns from this source have each year been practically double those of the preceding year, until it now reaches the large figure given above. It is not likely that this ratio of growth will be continued in the immediate future, but it is safe to predict that the creditable production already achieved will be maintained, and that eventually a greater and more profitable field for cyanide, in the winning of gold, will be opened in Montana, the importance and extent of which can not at present be accurately predicted.

The gold taken from the cupriferous ores, almost all of which come from the Butte district, was greater in quantity during 1899 than the same yield had been in 1898, due to the larger tonnage of ore mined, and the consequent greater production of the several precious metals contained.

The diminished yields of gold in several of the classes of ore noted are explainable in various ways. The decrease in the amount of gold from placers has been a small but constant one for several years. Because of the unsettled conditions existing some years ago, many who had followed quartz mining turned to the washing of gold from the graves that abound in the state. The records of the government assay office at Helena show as a result that the number of small and independent producers became largely increased at that time, until in 1896 the maximum of this class was reached. Since then, owing to the opening of the new Alaskan gold fields, and the improved business conditions of the country, these small placer miners have diminished, and comparatively few of them were working in 1899.

The lessened output of gold from mills arose principally in the district around Marysville. In that locality some of the mills were idle throughout the entire year, while the large mills of the Montana Mining Company, Limited, were not worked at full capacity, and were partially closed down for various intervals. In some instances the cyanide process is also replacing the stamp mill and amalgamation.

The heaviest decrease in the amount of gold from any of the classes of ores was for that contained in the smelting ores. Many of the mines of the state did not hold up to their excellent showing of the previous year. This was especially true of properties in Madison county.

The detailed origin of silver in 1899, when compared with corresponding figures for 1898, show the following results:

Classed as—	1898.		1899.		Increase or Decrease.
	Fine Ounces.	Coining Value.	Fine Ounces.	Coining Value.	
Placer bullion ..	4,021.33	\$5,199.24	3,592.78	\$4,646.30	*\$554.04
Mill bullion ..	1,028,619.10	1,329,331.77	2,300,392.07	3,479,133.17	**2,149,301.40
Cyanides ..	73,006.96	100,357.47	97,684.63	126,299.59	** 25,442.11
From copper ores.	9,406,911.71	12,377,542.46	9,830,572.37	12,787,810.73	** 510,268.27
From lead ores ..	2,763,961.44	3,573,645.50	2,504,695.24	3,238,393.25	*\$35,251.65
From smelting ores	1,448,111.46	1,972,305.73	1,063,317.64	2,160,551.99	** 278,246.26
Total ..	\$14,818,861.96	\$19,159,482.17	16,850,764.85	\$21,796,834.62	.....

* Decrease.

** Increase.

Net increase, \$2,627,352.55.

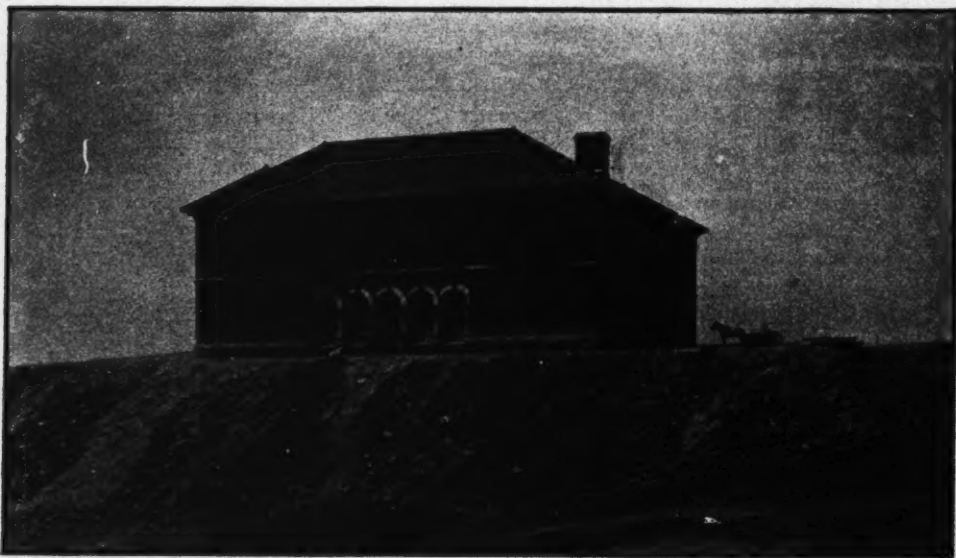
This table presents a largely increased output of silver as having been a feature of the year's production. The amount won in placer workings is of no importance, being small at best and varying annually with the gold from the same source. The decrease of silver from lead ores was due to the lessened extraction of this product from the mines of the state. The improvement in the amounts taken from the products treated in the cyanide mills and from the copper ores has the same explanation as that already set forth for the increases of gold from the same sources. The large gain in the silver won in the mills of the state was because of a renewal of operations by plants that had been idle for years. Most important among these were those of the granite and bimetallic properties at Philipsburg, between whom a consolidation had been effected in the interest of economy in 1898, and a resumption of mining and milling operations undertaken. It is to this work at Philipsburg that a large percentage of the total gain in the silver output for 1899 is due.

The increase in the amount of copper produced in 1899 came from the larger extraction and reduction of Butte ores during the year, the conditions at both mines and reduction works having been favorable for such a showing. A considerable stock of copper was also held in stock at the close of the previous year by the refineries. This was not shown as production in 1898, but having been marketed in 1899, it is here treated as having been produced in the latter year.

Copper is the paramount feature of the mining industry in Montana. More than 80 per cent of the total values won in the state during 1899 came

from the mines at Butte in the shape of gold, silver and copper. The effect on conditions, both local and general, is enormous. While the number who find direct employment in mining and reducing the copper ores reaches into the tens of thousands, it is not greater than those indirectly benefited by the manufacture and sale of the necessary supplies for these employes and for the mines. The towns of Butte, Anaconda and Great Falls, having a combined population of more than 85,000, exist large'y to minister to the mining and smelting industries connected with copper mining. But more important than is all this great advantage to Montana and to the commercial life of the country, is the effect on the industrial progress of the world.

The maintained high price for copper throughout 1899 proves that the



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demand for this metal is genuine and the supply limited for immediate needs. This latter fact, too, is proven in that while the production has constantly increased there has been no accumulation of public stocks, and shows that the industrial consumption of the metal has at least kept pace with the production. Nearly one-quarter of the world's supply of copper in 1899 came from Montana. The mines of this state, therefore, have made possible with their output of copper the expansion of the electrical industry, especially in installations for power transmissions, of shipbuilding, and of marine engineering, besides many other industries, among which are the manufacture of structural materials and conveniences for domestic and public use. But for the Montana copper to make the supply as large as it was in 1899 the advancement in all of these branches would have been delayed and in some cases even prohibited.

The mining of lead in Montana continues as the least important of the

several branches of mining, the amount of the metal secured having been less in 1899 than for several years previous.

Beaverhead County.—This county in 1899 yielded the following metals:

Description	Quantity.	Value.
Gold, fine ounces	7,822.486	\$161,706.11
Silver, fine ounces, (coinage value)	353,362.01	327,449.87
Copper, fine pounds, at \$16.67 per hundredweight	165,719	27,625.36
Lead, fine pounds, at \$4.47 per hundredweight	1,038,894	46,438.56
Total		\$563,219.90

The above figures show largely decreased values from those of the output for the previous year. They originated from the districts at Glendale and Bannack. The operations at the former place were chiefly those of the Hecla Consolidated Mining Company, and included the mining, milling and reduction by smelting of ores. The extensive operations of this company have continued over a period of many years and present an unbroken record of profitable results. In more recent years, however, the ore supply has been uncertain, and this has materially curtailed their production.

The operations at Bannack were confined principally to the dredging of Grasshopper Creek for placer gold. This was the scene of the first successful work in Montana of handling gravel by machinery, and for some years now the several plants at this point have annually taken a considerable quantity of gold from ground that it had not been practical to reach by the earlier and more primitive methods of washing, Bannack having been one of the first places that gold was discovered and placer mining commenced in the state. It is probable that a considerable yield of gold will come from the Bannack dredges in 1900. Some quartz mining is also done in the vicinity of Bannack, the ore found carrying free gold, and is worked in stamp mills.

Broadwater County.—The precious metals taken from this county in 1899, were as follows:

Description	Quantity.	Value.
Gold, fine ounces	8,362.627	\$170,803.66
Silver, fine ounces, (coinage value)	144,948.35	137,407.96
Lead, fine pounds, at \$4.47 per hundredweight	1,068,036	48,635.21
Total		\$406,846.83

The output of precious metals from this county is also largely decreased from the figures of the previous year. The production originated from all sections of the county, the principal camps being those at Winston, Hassel, Radersburg and Diamond. The largest decrease comes from the Winston district, where the heavy producers of the previous years were idle or were only able to work at a much lessened capacity. The development of the mines at this camp, however, was earnestly prosecuted, and at the close of the year conditions at the East Pacific and other properties were believed to be most favorable for an early return to the larger production of former years.

The output from the Hassel district was mostly gold bullion from the Diamond Hill mines. This property consists of a large deposit of a low-grade milling product carrying gold, and equipped with a complete and modern stamp mill. An insufficient supply of water for power to run the mill has greatly interfered with profitable operations and curtails the work so that it can only be carried on during the few spring months when the water is more ample. Should this obstacle eventually be overcome it is probable that this property will add considerably to the output of gold in Broadwater county. The present location of the mill makes fuel for steam power sufficiently expensive to prevent the low values contained in and savable from the ores by milling paying any margin of profit above expenses. Considerable prospecting of various discoveries about Hassel has been done, and the ultimate solution of the power problem at the Diamond Hill mines will bring the district into new prominence and tend to place some of these obscure claims among the producing and active mines of that section.

The Radersburg district continued an output of values in 1899 but little changed in quantity and amount from its output of recent years. Although at one time it was a very active and largely producing camp, it has now settled down to the steady and profitable working of its older properties, the principal of which are the Keating and Blacker mines. Recent discoveries in the district have as yet been unimportant from the standpoint of actual production.

Diamond City is situated near Confederate Gulch, the scene of a very rich placer deposit that was worked extensively in the earliest days of Montana mines. From its gravels about \$19,000,000 in gold dust has been taken since its discovery. Operations in 1899 were confined to the re-working of portions of the old ground in a small way. A company of Milwaukee capitalists control the greater portion of the gulch, and their winnings in 1899 were the most important at this point. Besides the work done by this company, a number of individuals were washing for gold, their gains varying with the time engaged and the richness of the ground attacked.

While the major part of the production of Broadwater County comes from the above four districts, there are a number of other localities where work has been followed successfully. From the vicinity of Townsend the aggregate of placer gold secured in small lots by individual miners was considerable.

Cascade County.—The precious metal contents of ores mined in this county during 1899 were as follows:

Description	Quantity.	Value.
Gold, fine ounces	2,128.536	\$44,000.54
Silver, fine ounces, (coinage value)	919,723.21	190,086.57
Lead, fine pounds, at \$4.47 per hundredweight	3,810,679	170,337.35
Total		1,394,424.46

The above value is almost double that of the 1898 product, and shows that conditions at Neihart and Barker, the leading metal-producing districts

in the county, are highly prosperous. The properties at these camps are distinctively silver-lead producers, and include the Broadwater, Florence, Big Seven, and other well-known mines. The future is promising for a continued large output of the above metals by the mines of Cascade county.

The city of Great Falls is in Cascade county. It is located near the series of rapids that have been formed in the Missouri river. Because of the world-famous reduction works located here, it plays an important part in the production of precious metals in Montana. The enormous water power at this point has been but partially developed and utilized in the location and erection of the mammoth copper smelter and refinery of the Boston and Montana Consolidated Copper and Silver Mining Company and the Great Falls plant of the American Smelting and Refining Company.

The former treats the great tonnage of ore that the company mines from its Butte properties. Many freight trains are daily employed to haul this ore to Great Falls for reduction into pure copper bars. The distance from the mines to these works is 178 miles through a mountainous country and over the main range of the Rocky mountains, where the heavy and long grades and tunnels are frequent. The expense of this long haul is justified by the lessened cost of treatment because of the water power here available for the operation of these works. In 1899 the output of copper by this company was second in Montana only to that of the Anaconda Copper Mining Company, and the activity created alike for the laboring, the railroad, and the business man was the reason of the prosperity and growth of Great Falls.

The Great Falls plant of the American Smelting and Refining Company is also an important factor in the general prosperity of that city. This is a custom smelter for the purchase and reduction of ores. At no time has its operations been greater than they were in 1899. Because of the cheap power afforded by the water at this point the company who own and operate it find it advantageous to smelt at these works all products purchased by them in Cascade county and northern Montana, as well as a large percentage of the silver-lead ores from the mines of British Columbia.

Deer Lodge County.—Below is a table showing the production of metals in this county during 1899:

Description	Quantity.	Value.
Gold, fine ounces	10,349.123	\$212,925.36
Silver, fine ounces, (coinage value)	4,493.37	5,809.60
Copper, fine pounds, at \$16.67 per hundredweight	50,000	8,335.00
Total		\$228,070.96

The above values are a heavy decrease from the amounts credited to this county in past years, but due to the segregation by the state legislature at the beginning of the year of the northern portion adjoining the main range of the Rocky mountains, wherein was situated the Bald Butte and other producing mines, and the addition of it to Lewis and Clarke county. Since such division the output from this territory has been credited to Lewis and Clarke county. But for this action of the legislature the production would have been

quite close to that of 1898; so that what is now Deer Lodge county maintained about the same production as in previous years. The product consisted of placer gold and mill bullion from the district contiguous to Deer Lodge city and of mill bullion from Coloma, Cable and elsewhere.

The city of Anaconda, the location of the famous smelters and refinery of the Anaconda Copper Mining Company, is in Deer Lodge county. These works are the largest of the kind in the world and give employment to many hundreds. They were in full operation throughout the year. Numerous improvements in the plant and replacement of old methods by new were made to keep the works at their highest efficiency.

The plant at Anaconda comprises what is known as the upper and lower works—the converter plant and the refinery. All are located on the hillside below and overlooking the city. Prior to 1891 rail communication between Butte and Anaconda was by the Montana Union railway. Rates being unsatisfactory and an adjustment not being accomplished, the Anaconda Company built and now controls the Butte, Anaconda and Pacific railway between its mines and works, a distance of 28 miles. Owing to the consolidation of the interests of several of the Butte mines in 1899 the daily tonnage of ore and matte passing over this line on its way to the smelters and refineries was the largest since the location of these works at Anaconda.

The method of reduction at Anaconda embraces the crushing and sizing of the crude ore with water concentration, roasting concentrates, reduction of calcined concentrates and the better grade of crude ore in reverberatory furnaces to copper matte, converting of copper matte into "blister copper," smelting in shaft blast furnaces of converter lining with the higher grade and crude ores, poling or casting, refining of "blister copper," and refining of slimes of gold and silver from electrolytic vats. These several processes were described in the Montana report for 1897 in detail.

Fergus County.—The values won from ores mined in this county during 1899 were in the following amounts:

Description	Quantity.	Value.
Gold, fine ounces	3,883.774	\$123,643.91
Silver, fine ounces, (coinage value)	6,380.64	6,366.78
Total		\$130,010.69

Nearly the entire product of Fergus county came from the district about Maiden, where the Great Northern Mining and Developing Company treated the ore from Gilt Edge mine by the cyanide process, they having erected a plant for this purpose in 1898. Besides the values obtained by the above company, considerable amounts of gold were won by parties working on stray tailings from the former milling of ores from the Spotted Horse mine, a famous producer in former years. Another producer was the New Year mine.

Flathead County.—The metals from Flathead County in 1899 were as follows:

Description	Quantity.	Value.
Gold, fine ounces	800.364	\$16,584.37
Silver, fine ounces, (coinage value)	47,380.14	61,380.18
Lead, fine pounds, at \$4.47 per hundredweight	1,066,190	47,659.10
Total		\$125,623.65

Owing to the development work done at the mines in the county and to the abandonment of prospecting mills, and experimental concentrators, with a view to replacing them with larger and more economical plants, the production as shown above is a decrease in 1899 from what was taken out in 1898. Some properties were also in process of sale and transfer, during which time they were idle.

The development of this county was commenced shortly after the building of the coast extension of the Great Northern Railway a few years ago. This made possible the development of its mineral wealth. Unquestionably a wide field for mining is offered, and it is believed that production will increase as the properties already discovered are brought to proper development and equipment under the intelligent and successful management. The industry in 1899 seems to have been in that transitory stage which has characterized all section of the State, in some degree, following the first and attempted workings of mines after discovery and prior to larger and more profitable operation.

The recent opening for settlement of the ceded strip from the Blackfeet Indian reservation throws open additional territory in this county to the prospector. It is believed that many discoveries of mineral wealth will be made in addition to those already known. The topographical features of this newly opened region are extremely mountainous. The conditions seem excellent for successful prospecting.

Granite County.—The precious metals won by placer and quartz mining in 1899, were as follows:

Description	Quantity.	Value.
Gold, fine ounces	7,968.448	\$164,515.72
Silver, fine ounces, (coinage value)	1,989,212.53	2,599,912.44
Total		\$2,764,428.16

The above figures show the gain in 1899 to have been nearly 86 per cent over those of 1898 and a gain of nearly 255 per cent over those of 1897. The resumption of work in the mines and mills of the Granite and Bimetallic companies at Philipsburg has already been noted. These properties are distinctively silver producers, and the renewal of operations under a consolidated management in 1898 marked the revival of silver mining as an industry in Montana. The above figures show the degree of success that has attended the experiment and Montana, although yielding her former title of the "Silver State" to Colorado, points with pride to the work done at Philipsburg in 1899.

under legislation and circumstances generally believed to have been adverse to the profitable operation of silver mines.

During 1899 the Denver and Montana Reduction Company erected a cyanide mill at Bearmouth to work such custom ores as might be offered for purchase as were suited to this process.

Jefferson County.—The following table shows the production from Jefferson county in 1899:

Description	Quantity.	Value.
Gold, fine ounces	7,415.706	\$153,296.29
Silver, fine ounces, (coinage value)	337,309.36	1,146,029.58
Copper, fine pounds, at \$16.67 per hundredweight	25,637	4,282.02
Lead, fine pounds, at \$4.47 per hundredweight	1,400,800	62,619.34
Total		1,362,537.23

These figures show a decrease from what had been the value of the production in 1898. The largest producing mine in the county in 1899 was the Elkhorn, a property that for many years has enjoyed this distinction, during which time it paid large dividends to its owners. The ore carried its chief value in silver contents, both lead and gold being associated with the silver, but in less important quantities. For several years the ore supply has been failing, and near the close of 1899 all that could be profitably extracted was exhausted, the pumps were drawn, and the mine finally abandoned to fill with water. To many this passing of this historic property from the list of Montana producers in the future, though inevitable and regretted, recalls its bonanza days, when large contributions were made to the mineral wealth credited to the state in the past.

The showing made by the leasers working on the Golden Sunlight group, near Whitehall, was creditable. The output from the Grey Eagle, at Wickes, a recently opened property, proves that it is likely to be an extensive producer, and in some measure make up for the decrease this county will hereafter suffer in its yield of metals because of the abandonment of the Elkhorn.

The Winscott mill, a property in the extreme northern part of the county, was in steady operation during the year and put forth a considerable product of gold bullion.

Lewis and Clarke County.—The production of metals by the mines of this county was increased in 1899 over that of the preceding year. Following are the figures for 1899:

Description	Quantity.	Value.
Gold, fine ounces	62,535.675	\$1,292,727.13
Silver, fine ounces, (coinage value)	293,251.90	282,790.33
Lead, fine pounds, at \$4.47 per hundredweight	600,000	22,350.00
Total		\$1,577,867.46

The output of gold by Lewis and Clarke county was the largest of any in the state during the year. The gain in the amounts of gold and silver

taken from ores mined in this county in 1899 was a considerable one, and largely arose because of the addition by the state legislature to the territory of this county of the portion that had been segregated from Deer Lodge county. This brought the Bald Butte mine and other properties into Lewis and Clarke county.

At Marysville the Montana Mining Company did not operate their two large stamp mills at full capacity one or the other having been closed down at various times, which were determined by the grade and character of the ore supply mined, the process being different in the separate mills to accumulate the varying nature of the mine product. The falling off thus occasioned was more than made up by this company at their cyanide mill, where the tailings



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impounded behind settling dams below the mills were treated. The amounts won were the largest since the working of the tailings was first attempted in 1897 and yielded a handsome profit to this company.

A combination stamp and cyanide mill was also in operation at the Belmont mine, near Marysville. After the usual milling by stamps and the gathering of values by amalgamation the tailings were subjected to an immediate leaching in the cyanide solution and a large portion of the remaining values extracted. The process resulted in the saving of a high percentage of the values and seems to have been most satisfactory.

At the Bald Mountain mine, also near Marysville, a 20-stamp mill, with pans and settlers for the additional treatment and amalgamation of the ore, was in operation during the entire year. The amount of the output from

this mill could not be included in the returns of Lewis and Clarke county, as the owner did not furnish a statement of their quantity and value, and it is not known that any of the produce was sold.

The Bald Butte mine, some 4 miles from Marysville, kept the 40-stamp mill belonging to that property working at full capacity in 1899. The output of metals by this property makes it second in importance in the county only to the yield by the Montana Mining Company, Limited.

A large tonnage of low-grade ore carrying iron in quantities desirable for fluxing purposes at the smelters, and having lead, silver and gold in small values contained in the ore, was taken from the War Eagle mine at Butler and shipped to the several reduction plants in the state. The mining of this product afforded employment to a considerable number of men during the year.

Other districts in Lewis and Clarke county yielding gold bullion from mills were those at Empire, Granite Butte, Gould, York and Unionville. Placer gold was taken from the gulches at Canyon Ferry, Helena, York and Butler. The Rimini mines continued shipments of concentrating ore and smelting ore in 1899.

The plant of the American Smelting and Refining Company at East Helena handled the largest tonnage in 1899 since its opening for the purchase and treatment of custom ores, this product coming principally from Montana and from the Coeur d'Alene district of Idaho. Power was furnished by electrical transmission from the dam across the Missouri river at Canyon Ferry. An addition to the works in 1900 is contemplated which will nearly double the present capacity of these works.

Near East Helena is also the Peck concentrator, a plant that has been erected for the concentration at small cost of custom ores of too low grade for smelting. These works were operated during the entire year.

Madison County.—Below is a table showing the output of precious metals in Madison county during 1899:

Description	Quantity.	Value.
Gold, fine ounces	23,708.977	\$490,108.65
Silver, fine ounces, (coinage value)	104,350.74	134,198.12
Copper, fine pounds, at \$16.67 per hundredweight	40,000	6,668.00
Lead, fine pounds, at \$4.47 per hundredweight	370,477	16,500.32
Total		\$648,254.49

This is a heavy decrease from the yield in 1898, the value of the product at that time having been largely over \$1,000,000. This was due to the culmination, in 1899, of several unfortunate features connected with mining in this county, some of which will be overcome in 1900. The working of large ore bodies recently opened in the county and the sale and equipment of properties promise that the output of metals will be heavily increased in the future and that this advantage will be a permanent one. Both placer and quartz mining are actively followed in Madison county. The principal center of the former is at or near Virginia City, along Alder gulch. This was discovered in 1863, and since that date more than \$90,000,000 in gold have been taken from the gravel of the gulch and bars. The leading feature of the operations

at this point in 1899 was the work done by dredging machines on the ground at or near the mouth of the gulch. The present plants were installed and first operated in 1899. The actual amount of gold recovered by them was less important than the actual experience had with the work to be done and the knowledge thus obtained and made available for future guidance.

Complete preparations have been made for carrying on continuous work in 1900, and the values then won and the profits realized will determine the success or failure of again working much of the ground in the gulch by these dredging plants. As the length of the gold-bearing gravel in the gulch is about 17 miles, the demonstration that this ground can be thus profitably worked will be most important. The aggregate amounts recovered in 1899 by the various companies, individuals and Chinamen, also working in this gulch, was a large one. Placer mining was also done in Norwegian, Bivens, Harris, Wisconsin, and other gulches in the South Boulder mountains. Although Madison county is a large territory, and its surface is broken by the Madison, Tobacco Root, Snow Crest and Ruby mountains in the southern portion, quartz mining is centered in the northern section of the county in the South Boulder and McCarty ranges of mountains. Pony, Richmond Flat, Norris, Red Bluff, Sand Creek, Gaylord, Sheridan, Twin Bridges, Leiterville and Virginia City are located in the South Boulder range, while Rochester and Silver Star are at the base of the eastern slope of the McCarty range.

The principal property working at Pony in 1899 was the Clipper group of mines, owned by Elling & Morris. It included a number of claims lying some 2 miles above the town, to which point the ore was hauled for milling at a 20-stamp mill belonging to the property. The ore is free milling, and the tailings susceptible of easy and cheap concentration. The mine has been well opened by tunnels, but a long one run on the Boss Tweed to cut the vein at a depth of about 1,200 feet was the feature of the development in 1899. Shortly after the close of the year this tunnel encountered the lead as anticipated, and the ore body from subsequent development promises to become one of the largest and most important discoveries ever made in Montana, and should make the output of precious metals from the Pony district in the future a heavy one.

The Garnet Gold Mining Company of St. Louis own a mine near Pony, on which a stamp mill was erected in 1898. The output of values from this property has since been greatly increased.

The Monitor and Revenue mines on Richmond Flat did not furnish the tonnage of ore that characterized their work in former years, and the loss in the total production to this county was considerable. The litigation threatened between these companies was avoided by the consolidation of the properties under a single ownership, and in the future it is probable that a return will be made to the heavier yield of ore formerly extracted. One of these properties is the Madisonian mine, whose sale to Chicago capitalists for a large sum is announced, after a thorough examination of the mine had been made, and a test of the ores by the cyanide plant erected for such a purpose. The ore bodies in this property are reported to be large, and the mill is to be erected sufficiently large to handle the ore from the property.

Norris and Red Bluff are the center of a region in which numerous discoveries have been made, and from which small shipments were taken in 1899. At Sand Creek prospecting was active and some ore was taken out. A small amount of bullion was made at the Chile mill from ores extracted at that mine.

In 1898 the May Flower group near Gaylord was the largest producing property in the county. The mine product is a high-grade ore, carrying the heaviest value in gold, and is sent for treatment to the smelter. Although the output from these mines was diminished in 1899, it was nevertheless the greatest value of any of the Madison county properties.

The fear entertained for some time that the mammoth smelter built by the



INTERIOR VIEW SCHOOL OF MINES-BUTTE.

Parrott Mining Company at Gaylord for treating the copper ores from the Butte mines would be indefinitely abandoned grew into a settled conviction in 1899. This plant was idle during the entire year. The Leiter mine at Leiterville was closed during the most of the year. From the vicinity of Sheridan some ore in small lots was taken out for shipment; the values of these have been inconsiderable. Some mining was done near Twin Bridges. The lead smelter at that point after having been remodeled, was put into commission, but the results were unsatisfactory and it has again been closed. Virginia City is in Alder gulch, and the center of the placer mining done in that section. The Kennett mine is also near this place, and after having recently been equipped with a new stamp mill was closed down and remained idle throughout the year.

Meagher County.—The values recovered from ores mined in this county during 1899 were contained in the product shipped from the mines at Castle and vicinity. These values are as follows:

Description	Quantity.	Value.
Gold, fine ounces	343.867	\$5,030.30
Silver, fine ounces, (coinage value)	150,030.96	133,986.36
Lead, fine pounds, at \$4.47 per hundredweight	3,000,000	223,500.00
Total		\$412,496.66

Missoula County.—The precious metals won in this county during 1899 came from placer mines. Their value was as follows:

Description	Quantity.	Value.
Gold, fine ounces	2,749.898	\$60,845.44
Silver, fine ounces, (coinage value)	100.96	130.53
Total		\$60,975.97

Park County.—The returns from the production of gold and silver by the mines in this county in 1899 were as follows:

Description	Quantity.	Value.
Gold, fine ounces	5,983.178	\$121,616.04
Silver, fine ounces, (coinage value)	458.73	596.09
Total		\$122,209.13

Nearly all of the above came from the vicinity of Gardner, the region tributary to the Boulder river and the placers near Emigrant Peak.

In the vicinity of Gardner the leading operations were those at Bear gulch and Crevasse mountain. At the former place the Bear Gulch Mining Company was engaged in preparing their property for a large future production by the development of the mine, the completion of a mill, and the erection of suitable quarters for employees. Since the commencement of milling operations their output of gold has been considerable. Other companies have acquired property in this camp, and some gold came from their operations in 1899. The activity at this place has restored Park county to the list of producing counties in Montana, it having at one time previously yielded considerable gold. For some years last past the output has been small.

The mines in the Boulder district did not produce largely in 1899, while the yield from the neighborhood of Emigrant Peak was a considerable quantity of placer gold.

Silver Bow County.—For many years the output of precious metals of this county has been the largest in the state. The quantities and values in 1899, were as follows:

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Description	Quantity.	Value.
Gold, fine ounces	62,038.377	\$1,282,447.08
Silver, fine ounces, (coinage value)	9,855,831.97	12,742,893.88
Copper, fine pounds, at \$16.67 per hundred weight	345,245.908	40,882,382.96
Total		\$54,907,723.92

The production of the Butte mines dates from 1882. The following table shows the output to have been more than \$475,000,000 during the past eighteen years:

Year.	Gold.	Silver.	Copper.
	Fine ounces.	Fine ounces.	Fine lbs.
1882	12,093.750	2,699,296.38	9,058,284
1883	14,560.875	3,480,468.75	24,064,348
1884	21,776.006	4,481,180.26	43,093,064
1885	13,838.297	4,126,977.00	67,797,864
1886	31,223.450	5,924,180.38	57,611,485
1887	48,175.743	6,958,822.92	78,700,000
1888	44,330.062	8,275,768.87	98,504,000
1889	31,952.225	6,580,038.75	104,589,000
1890	25,704.730	7,500,000.00	112,700,000
1891	29,385.354	7,965,089.77	112,383,430
1892	36,232.500	8,311,130.82	153,413,284
1893	33,807.877	6,068,730.16	155,575,499
1894	36,768.015	7,541,124.46	165,194,385
1895	41,473.863	10,061,760.52	197,190,050
1896	59,815.756	11,120,731.78	228,896,943
1897	54,126.037	10,710,815.45	226,826,507
1898	55,243.539	8,996,555.01	216,648,077
1899	62,038.377	9,855,831.97	245,245,908
Total	652,368.167	131,268,203.95	2,337,382,834

Figuring the gold and silver at their coinage values, and copper at 12½ cents per pound, which is believed to be a fair average price for copper during the above period, the value of the total output of these three metals in Silver Bow county has been:

Gold	\$13,485,644.80
Silver	169,720,506.11
Copper	292,172,583.20

Total.....\$475,379,003.91

These enormous values have practically originated at Butte, the greater portion of the production having been restricted to a small area, not exceeding 2 square miles in extent. The mines are in the Granite mountain, just above the city, and have made Butte the most busy and prosperous place of equal population in the world. Its commercial importance, as the outgrowth of its mining activity, was such that ten years ago the three greatest trans-continental railway systems of the United States were attracted to its gates, and sought to share in the great traffic here centered.

Butte was first settled in 1864. This was due to the discovery of placer gold in Missoula gulch, now a part of the city. The output and importance of these placers was duplicated elsewhere in neighboring camps of the state, now forgotten, where the ground was richer and conditions more favorable.

If the local history of Butte had been uneventful prior to the exhaustion of its gold-bearing gravel, the discovery and working of the silver-bearing ledges on the hill afterwards brought little or no increased importance to the camp. The most interesting fact of this second period was the one that brought the camp into its present prominence. The Anaconda mine, and others of the great properties of to-day, as well, were brought, developed, and worked in the fullest confidence that the contained silver values constituted their greatest worth. There was nothing to indicate, and no imagination so wild as to guess that at a comparatively slight depth the greatest deposits of copper yet known to the world were to be found.

The year 1882 marks the discovery and opening of the Anaconda as the first copper mine at Butte. At that time the dark red and brown quartz, then being developed for its gold and silver, carried only traces of native copper or very limited appearances of the oxide. While preparing to mill this ore the main shaft on the Anaconda was driven downward until it suddenly entered the rich copper ledge, now famous throughout the world, at a depth of about 300 feet. This led to other and similar discoveries in the camp immediately.

Previous to 1882 an average of 80 per cent of all the copper produced in the United States came from the mines bordering Lake Superior. In the following year, 1883, the Lake Superior region produced 51.6 per cent, Arizona 27 per cent, and Butte 21.4 per cent of the domestic copper. The percentage of the Butte output continued to increase steadily, and in 1887 it became greater than the yield from the Lake Superior mines. This lead has ever since been advanced until 1898, when 60 per cent of all the world's copper was supplied by the United States, Butte furnishing 41 per cent, Lake Superior 30 per cent, and Arizona 21 per cent of all the domestic production. Thus Butte furnishes a quarter of the copper product of the world, nearly one-half of which is the output of a single company, the Anaconda.

Most of the mines that at present furnish the principal wealth of this district are situated at the head of Dublin Gulch. The mountain spur lying between this gulch and Silver Bow Valley is called Anaconda Hill, from the mine of that name. The region is characterized by gently rounded topographical forms and a general barrenness of aspect. This latter is due largely to the cutting of timber for mine use following the first workings, and to the sulphur-laden fumes from the smelting works since preventing a renewal of vegetation. The principal mines of the Anaconda company lie east of Main street and south of the portion of Butte known as Centerville. Approximately they form a horseshoe, with the open heel toward Main street, or to the west. On the north arm of this, and lying along the Syndicate lode, are the Mountain Consolidated, Green Mountain, Diamond and Wake-Up-Jim mines. The Bell, High Ore and Modoc are on the Bell-Modoc lode or system of veins and form the curve at the toe of the shoe to connect the two arms. On the south arm is the famous Anaconda lode, lying along which are the St. Lawrence, Never Sweat and Anaconda mines.

Besides these claims are many others at Butte owned by the Anaconda Company, some of which, in point of production, rank closely with those already named, while others are but partially developed and worked as yet. The

ground of the Boston and Montana Consolidated Copper and Silver Mining Company is east of and along the continuation of the Anaconda lode. Besides the Mountain View and other mines on the Anaconda lode, this company owns a number of claims in the same vicinity. From these properties is taken the great tonnage of ore that goes for treatment to the Great Falls plant, belonging to this company. The ground of the Montana Ore Purchasing Company adjoins that of the Anaconda and Boston and Montana companies. From the mine of this company is taken the ore that supplies their smelter at Meaderville. Immediately south of the Anaconda lode, and parallel with it, are the Parrot, Colusa Parrot, and other mines, while to the southwest of the syndicate lode is the Gagnon.



INTERIOR VIEW SCHOOL OF MINES-BUTTE.

There are many claims at Butte besides the properties already enumerated; of all, however, the Anaconda lode is the greatest and most important ore producer. It has been opened and traced for a distance of more than a mile. In the ground of the Anaconda company the lode consists of one broad ledge of ore with smaller and parallel veins that joint the main ledge. The strike is from a few degrees north to almost a 15 degrees south of east. The dip in the Anaconda mine is almost vertical for 400 feet, when it changes and varies from 60 degrees to 70 degrees south. The width is not uniform. The Never Sweat mine is at the west end of the lode; it consists of a number of parallel veins, rarely exceeding 15 feet in width, with spurs about 5 feet wide. In the Anaconda mine the main vein is from 25 feet to 40 feet in width, decreasing to 5 feet as it travels eastward through the St. Lawrence into the

Mountain View mine, although in places on the 1,300-foot level of the St. Lawrence it is 50 feet wide.

The syndicate lode has been opened continuously by underground workings for a distance of 5,500 feet. The general direction of the strike is from north 65 degrees east to south 80 degrees east. The dip averages 65 degrees south. This lode is notable because of its wide ore-bearing zone, which is often from 40 feet to 100 feet wide, both near the surface and in depth, although at intermediate points it may decrease to 5 feet. The syndicate lode has forks and spurs along it, so that the vein is sometimes double and sometimes divided into parallel veins.

The veins in the Bell-Modoc system, Ground Squirrel, Ramsdell-Parrot, and others of the Butte mines, though varying in details, have many of the general features of the Anaconda and syndicate lodes.

The scene on the Anaconda Hill is ever a busy one. Both surface and underground workings at all the properties are most comprehensive. Centered about the shafts are mammoth structures for housing the gigantic hoisting engines, air compressors and steam generating plants. Near by are the carpenter and machine shops, where the mining timbers are framed and the machinery repaired or rebuilt. Electric generating stations, ore bins, waste dumps, and railroads are also much in evidence. The great warehouses and yards are filled with immense quantities of mine supplies of every description, whose value reaches into the hundreds of thousands of dollars. At the Anaconda properties in 1898 the machinery for new installations and replacements of old cost \$461,612; timbers, \$429,886; the candles, \$41,761; fuel \$207,861; labor, \$3,376,502; oil, \$16,976; powder, \$147,296; tools \$37,427; fuse and caps, \$27,004.

The High Ore mine has the finest general equipment of any on the copper hill. The boiler power is furnished by two sets of boilers, known as the old and new plant. The old plant consists of seven sets, fourteen boilers in all. Of these, twelve are of 80 horse-power each, and two are of 60 horse-power each. The new plant has six boilers of the Scotch marine type, each of 140 horse-power, making an aggregate of 1,920 horse-power at the High Ore plant as against 1,750 at the Never Sweat, the next in power. Both the old and new boiler plants are connected by a brick flue 100 feet long, 8 feet high, and 6 feet wide, with a new steel stack 150 feet high and 8 feet 9 inches in diameter, weighing 64,000 pounds.

The hoisting engine at the High Ore, though ample for all requirements, is not equal to those at the Never Sweat and Mountain Consolidated mines, but identical with the ones in use at the Anaconda and St. Lawrence. It is a double Poppett valve engine of 25-horse-power capacity, with cylinders 30 inches by 72 inches. The flat woven-wire steel cables from the winding drums pass over the sheaves of a steel gallows frame 100 feet above the surface, to raise and lower the cages used in the hoisting of ores from the various levels.

The following statistical tables of Montana production showing the quantity and values of the various metals, their origin by counties, and from the several classes of ores, together with the final disposition of the ores and bullion as to sale and treatment, have been assembled from confidential returns

furnished by the producers. These totals have been verified by comparison with those made from figures and data given by the United States mint and assay offices and the smelters and refineries that handled the Montana product.

DEPOSITS AT THE UNITED STATES ASSAY OFFICE, HELENA, MONTANA,
DURING THE CALENDAR YEAR 1899.

County	Gold		Silver		Total value
	Standard ounces	Value	Standard ounces	Commercial value	
Beaverhead	1,067.392	\$30,230.51	68.60	\$34.52	\$30,265.03
Broadwater	2,779.406	70,314.47	399.01	304.43	70,518.90
Cascade	10.596	197.13	3.41	1.71	198.84
Choteau	15.053	390.06	.67	.34	390.40
Deer Lodge	8,610.137	160,123.49	1,325.97	671.22	160,855.71
Fergus	65.882	1,325.70	10.71	5.63	1,331.33
Flathead	245.035	4,553.77	40.51	21.95	4,585.13
Granite	2,554.676	47,523.73	570.96	289.20	47,812.90
Jefferson	2,735.575	50,894.35	437.12	224.29	51,118.64
Lewis and Clarke	31,998.177	595,377.54	15,109.70	5,152.55	600,530.00
Madison	8,852.409	164,085.89	2,303.97	1,194.62	165,280.61
Meagher	155.730	2,953.13	12.07	6.35	2,959.23
Missoula	3,065.442	56,845.39	112.18	58.94	56,904.23
Park	3,104.988	57,767.18	495.67	241.69	58,008.77
Ravalli	690.330	12,862.79	47.30	24.65	12,877.44
Silver Bow	2,067.583	38,406.69	501.81	258.53	38,725.27
Total Montana	69,029.925	1,384,276.38	22,300.06	11,359.77	1,395,636.05
Idaho	14,295.155	265,956.22	2,409.07	1,232.73	267,189.00
Oregon	411.616	7,057.97	91.71	45.39	7,103.36
Washington	508.393	9,458.46	124.43	63.39	9,521.85
Alaska	97.815	1,819.81	9.74	5.16	1,824.97
Northwest Territory	3,599.154	66,960.99	961.81	483.43	67,444.43
British Columbia	10,734.810	199,717.26	5,353.12	2,751.03	202,468.29
Ontario	106.174	1,975.23	12.07	6.54	1,981.87
Jewelry	66.899	1,244.63	15.09	7.54	1,252.19
Total	29,620.015	554,790.76	8,978.09	4,596.28	559,387.04
Grand Total	98,649.941	1,839,067.64	31,287.75	15,956.05	1,855,023.69

PRODUCTION OF GOLD AND SILVER IN MONTANA DURING THE CALENDAR YEAR 1899.

Summary by counties	Gold		Silver		Total value
	Fine ounces	Value	Fine ounces	Coinage Value	
Beaverhead	7,822.485	161,705.11	253,262.61	\$337,449.87	\$499,154.98
Broadwater	8,262.627	170,803.66	144,948.25	187,407.86	358,211.62
Cascade	2,128.536	44,000.54	912,723.21	1,190,086.57	1,234,087.11
Choteau	13.548	290.06	.60	.75	290.81
Deer Lodge	10,349.123	212,985.36	4,493.37	5,800.60	218,786.06
Fergus	8,888.774	183,643.91	5,380.64	6,956.78	190,600.69
Flathead	802.264	15,584.27	47,380.14	61,259.16	77,843.43
Granite	7,966.448	164,515.23	1,998,212.62	2,571,912.44	2,736,427.67
Jefferson	7,415.708	153,286.29	387,929.36	1,146,029.88	1,300,316.17
Lewis and Clarke	62,536.675	1,292,727.13	306,251.90	263,790.22	1,556,517.45
Madison	23,708.977	490,108.05	104,350.74	134,918.12	625,026.17
Meagher	242.857	5,090.30	160,030.96	193,906.30	198,996.60
Missoula	2,749.896	56,845.44	100.90	130.52	56,975.97
Park	5,882.176	121,616.04	453.72	699.09	122,315.13
Ravalli	841.753	17,400.63	95.67	123.69	17,524.31
Silver Bow	62,033.377	1,282,447.06	9,855,821.97	12,742,890.88	14,025,340.95
Returns from custom smelters, mints, and assay offices impossible to classify by counties	21,489.499	444,227.37	2,291,312.82	2,962,505.48	3,406,732.35
Total	233,126.717	4,819,155.95	16,860,754.95	21,786,834.52	26,605,991.47

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BULLION OF MONTANA PRODUCTION DEPOSITED AT THE UNITED STATES ASSAY OFFICE, HELENA, MONTANA, DURING THE CALENDAR YEAR 1890.

Origin	Gold		Silver		Total value
	Standard ounces	Value	Standard ounces	Commercial Value	
Placer gold	21,921.835	\$407,847.63	3,143.57	\$1,014.10	\$408,861.73
Mill bullion	47,108.090	876,429.30	19,196.00	9,745.67	886,174.83
Total	69,029.925	1,284,276.93	22,339.57	11,759.77	1,296,036.65

BULLION OF MONTANA PRODUCTION DEPOSITED AT THE UNITED STATES MINTS AND ASSAY OFFICES DURING THE CALENDAR YEAR 1890.

Institution	Gold		Silver		Total value
	Standard ounces	Value	Standard ounces	Coining value	
Mints.					
Denver	246.076	\$4,578.18	24.34	\$38.33	\$4,616.51
Philadelphia	1,933.705	35,968.43	2,805.73	4,486.95	40,455.77
San Francisco	26.186	487.18	3.42	5.90	493.16
Assay Offices.					
Boise	6,294.404	117,105.19	443.63	\$22.10	117,627.29
Helena	60,029.925	1,284,276.93	22,309.56	25,980.23	1,310,257.21
New York	65,427.471	1,217,385.37	859,970.75	1,000,690.23	2,217,945.40
Total	142,856.827	2,659,061.10	886,823.68	1,031,706.30	3,690,767.40

PRODUCTION OF GOLD AND SILVER IN MONTANA (ORIGIN DETAILED) DURING THE CALENDAR YEAR 1890.

Origin	Gold		Silver		Total value
	Fine ounces	Value	Fine ounces	Coining value	
Placer bullion	28,827.617	\$505,919.73	3,592.78	\$4,645.30	\$510,565.03
Mill bullion	64,070.150	1,324,447.73	2,000,392.07	3,479,133.17	4,803,580.90
Cyanide mill bullion	38,247.583	790,647.71	97,684.33	136,399.68	927,047.39
In copper ores	55,706.317	1,151,551.77	9,890,572.37	12,787,810.73	13,939,362.50
In lead ores	7,815.539	161,561.63	2,604,695.24	3,238,383.66	3,399,945.29
In dry ores and concentrates, classed as smelting ores....	33,459.502	705,028.48	1,063,817.56	2,150,551.90	2,855,580.47
Total	233,136.717	4,819,156.96	16,550,754.95	21,786,834.53	26,605,991.47

ORIGIN BY PERCENTAGES OF THE PRODUCTION OF GOLD AND SILVER IN MONTANA DURING THE CALENDAR YEAR 1890.

Origin	Percentage gold	Percentage silver
Placer bullion	12.37	0.03
Mill bullion	27.50	15.92
Cyanide mill bullion	16.37	.60
Copper ores	23.90	53.70
Lead ores	3.36	14.37
Dry ores	13.50	9.38
Total	100.00	100.00

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PRODUCTION OF COPPER AND LEAD IN MONTANA DURING THE CALENDAR YEAR 1899.

Summary by Counties.	Copper.	Lead.
	Fine lbs.	Fine lbs.
Beaverhead	155,719	1,083,894
Broadwater		1,088,086
Cascade		3,310,679
Deer Lodge	50,000	
Flathead		1,088,190
Granite	75,000	
Jefferson	26,687	1,400,880
Madison	40,000	870,477
Meagher		6,000,000
Missoula		350,000
Ravalli		150,000
Silver Bow	245,345,906	20,000
Custom smelters in addition to the above, not possible to distribute to counties.....		6,149,635
Total production.....	245,002,314	20,344,750

DISPOSITION OF GOLD AND SILVER OF MONTANA PRODUCTION DURING THE CALENDAR YEAR 1899.

Disposition	Gold		Silver		Total value
	Fine ounces	Value	Fine ounces	Coining value	
Deposited at the United States mints and assay offices.....	122,661.144	2,059,661.10	797,960.37	\$1,061,706.30	\$3,691,367.40
Shipped to custom smelters and refineries by producers.	104,485.573	2,159,496.95	16,052,794.48	20,755,128.22	22,914,624.97
Total	223,126.717	4,219,158.05	16,850,754.85	21,786,834.52	26,605,991.47

TOTAL PRODUCTION OF PRECIOUS METALS IN MONTANA DURING THE CALENDAR YEAR 1899.

Description.	Quantity.	Value.
Gold, fine ounces	223,126.717	\$4,219,158.05
Silver, fine ounces, (coinage value)	16,850,754.85	21,786,834.52
Copper, fine pounds, at \$16.67 per hundredweight.....	245,002,314	40,941,905.74
Lead, fine pounds, at \$4.47 per hundredweight.....	20,344,750	909,410.23
Total		\$68,457,307.54

PRODUCTION OF GOLD, SILVER, COPPER AND LEAD IN THE STATE OF MONTANA FROM THE YEAR 1893 TO 1899, INCLUSIVE.

Year.	Gold.	Silver.*	Copper.	Lead.	Totals.	Increase
1893 to 1891, inclusive..	\$300,000,000	\$11,000,000	.....	.....	\$311,000,000	Per cent.
1892	2,550,000	4,270,000	\$1,530,800	.....	8,450,800	.....
1893	1,800,000	5,000,000	3,452,800	9326,434	11,479,234	27½
1894	2,170,000	7,000,000	5,296,500	246,236	14,892,236	21
1895	3,400,000	11,500,000	6,779,500	274,260	21,954,260	80
1896	4,432,000	13,548,000	5,781,200	484,122	24,536,322	12
1897	5,978,536	17,817,546	5,852,750	907,002	33,557,494	35½
1898	4,300,353	18,790,736	15,105,946	569,160	38,666,095	7½
1899	3,500,000	19,300,950	13,324,970	436,975	36,562,995	3
1891	3,900,000	20,362,536	16,656,437	675,393	40,994,465	11½
1892	2,890,000	20,129,394	14,877,236	1,220,067	38,926,797	*** 5½
1893	2,661,366	22,423,323	19,105,464	900,035	45,419,399	18
1894	3,576,000	21,356,730	36,630,950	964,080	62,029,877	*** 5
1895	3,551,410	16,575,453	17,233,713	730,561	38,191,137	*** 11
1896	4,237,040	22,986,302	21,114,380	754,360	49,092,361	28½
1897	4,380,671	20,224,877	25,356,541	670,010	60,782,099	2½
1898	4,496,431	21,730,710	26,796,315	928,619	63,952,475	5
1899	5,247,813	19,159,482	26,102,616	809,056	51,319,067	*** 6
1899	4,812,157	21,796,835	40,941,906	906,416	68,467,309	23
Total	\$367,600,797	\$312,970,710	234,631,746	11,635,576	\$717,447,821	

* Coining rate.

** No annual compilations were made prior to 1891.

*** Decrease.

THE MINERAL PRODUCTION OF 1900.

The estimate of the mineral output of the state for 1900 is \$68,723,160, being an increase over 1899 of \$278,753. Copper shows an increase of 10 million pounds and gold of \$141,000. The total products for 1900 are as follows:

Copper pounds.....	335,000,000	\$41,246,250
Silver ounces.....	16,750,000	21,807,800
Gold, ounces.....	248,000	4,900,000
Lead, pounds.....	20,000,000	908,610
Total		\$68,723,160

Mr. Braden gives the following as the production of metals for 1898, the previous year:

PRODUCTION OF GOLD AND SILVER IN MONTANA DURING THE CALENDAR YEAR 1898.

Summary by Counties	Gold		Silver		Total value;
	Fine ounces	Value	Fine ounces	Coining value	
Beaverhead	9,591.674	\$129,277.50	363,263.92	\$476,129.21	\$674,416.71
Broadwater	10,522.021	218,129.62	294,168.06	367,409.21	585,538.84
Carbon	52.940	1,094.27	8.45	4.46	1,098.73
Cascade	1,008.562	20,949.85	430,397.96	556,474.12	\$777,323.98
Custer	62.206	1,285.61	10.52	12.26	1,297.87
Deer Lodge	23,504.596	486,989.23	10,723.13	13,675.26	500,664.49
Fergus	6,201.606	128,186.61	271.25	350.96	128,537.57
Flathead	1,623.716	31,477.23	75,239.39	97,379.86	128,857.19
Granite	8,614.411	176,008.50	1,008,416.91	1,297,347.11	1,473,355.61
Jefferson	10,943.672	226,222.71	1,006,989.28	1,340,034.52	1,566,257.23
Lewis and Clarke	43,899.552	907,484.24	106,956.31	215,962.70	1,123,447.04
Madison	47,240.616	976,550.20	111,234.95	142,896.50	1,119,446.70
Meagher	152.804	3,179.41	100,012.19	206,364.46	210,083.86
Missoula	3,066.274	63,385.51	3,122.34	4,006.96	67,422.47
Park	641.618	12,263.42	109.55	122.28	12,385.70
Ravalli	60.836	1,257.59	4.51	6.22	1,263.81
Silver Bow	55,343.589	1,144,058.62	2,996,555.01	11,621,909.61	12,776,963.03
Teton	35.463	723.09	2.52	3.20	726.29
Returns from custom smelters, mints and assay offices, impossible to classify by counties	31,471.425	650,572.09	1,171,216.90	1,907,230.07	2,627,802.16
Total	353,967.787	5,247,912.91	14,818,651.98	12,159,482.17	\$68,407,396.06

SEVENTH ANNUAL REPORT OF BUREAU

PRODUCTION OF GOLD AND SILVER IN MONTANA (ORIGIN DETAILED)
DURING THE CALENDAR YEAR 1898.

Origin	Gold		Silver		Total
	Fine ounces	Value	Fine	Coining	
Placer bullion	31,623.432	\$554,530.97	4,631.33	\$5,199.24	\$559,730.21
Mill bullion	30,590.945	1,065,993.10	1,023,619.10	1,329,931.77	2,395,594.87
Cyanide mill bullion	19,235.180	297,626.46	78,006.95	100,357.47	408,483.93
In copper ores	51,408.020	1,062,696.00	9,495,911.71	12,277,542.46	13,340,240.55
In lead ores	8,369.027	173,003.14	2,763,991.44	3,573,545.50	3,746,548.64
In dry ores and concentrates classified as smelting ores ..	62,002.143	1,294,101.15	1,448,111.45	1,972,305.73	3,194,406.98
Total	253,967.757	5,247,912.91	14,818,061.99	19,159,432.17	24,407,355.06

ORIGIN BY PERCENTAGES OF THE PRODUCTION OF GOLD AND SILVER
IN MONTANA DURING THE CALENDAR YEAR 1898.

Origin.	Percentage Gold	Percentage Silver
Placer bullion	12.00	.06
Mill bullion	21.90	6.90
Cyanide mill bullion	7.00	.53
Copper ores	30.15	64.13
Lead ores	3.35	18.66
Dry ores	24.20	9.73
Total	100.00	100.00

PRODUCTION OF COPPER AND LEAD IN MONTANA DURING THE CALENDAR YEAR 1898.

Summary by Counties.	Copper. (Fine Lbs.)	Lead. (Fine Lbs.)
Beaverhead	121,039	1,582,450
Broadwater		1,600,000
Cascade		3,729,168
Flathead	116,604	
Deer Lodge		1,000,000
Granite	55,000	
Jefferson	17,964	1,340,715
Madison	20,000	270,477
Meagher		6,000,000
Missoula		122,681
Silver Bow	216,648,077	
Custom smelters in addition to the above, not possible to distribute to counties		5,758,211
Total production	216,979,354	21,403,392

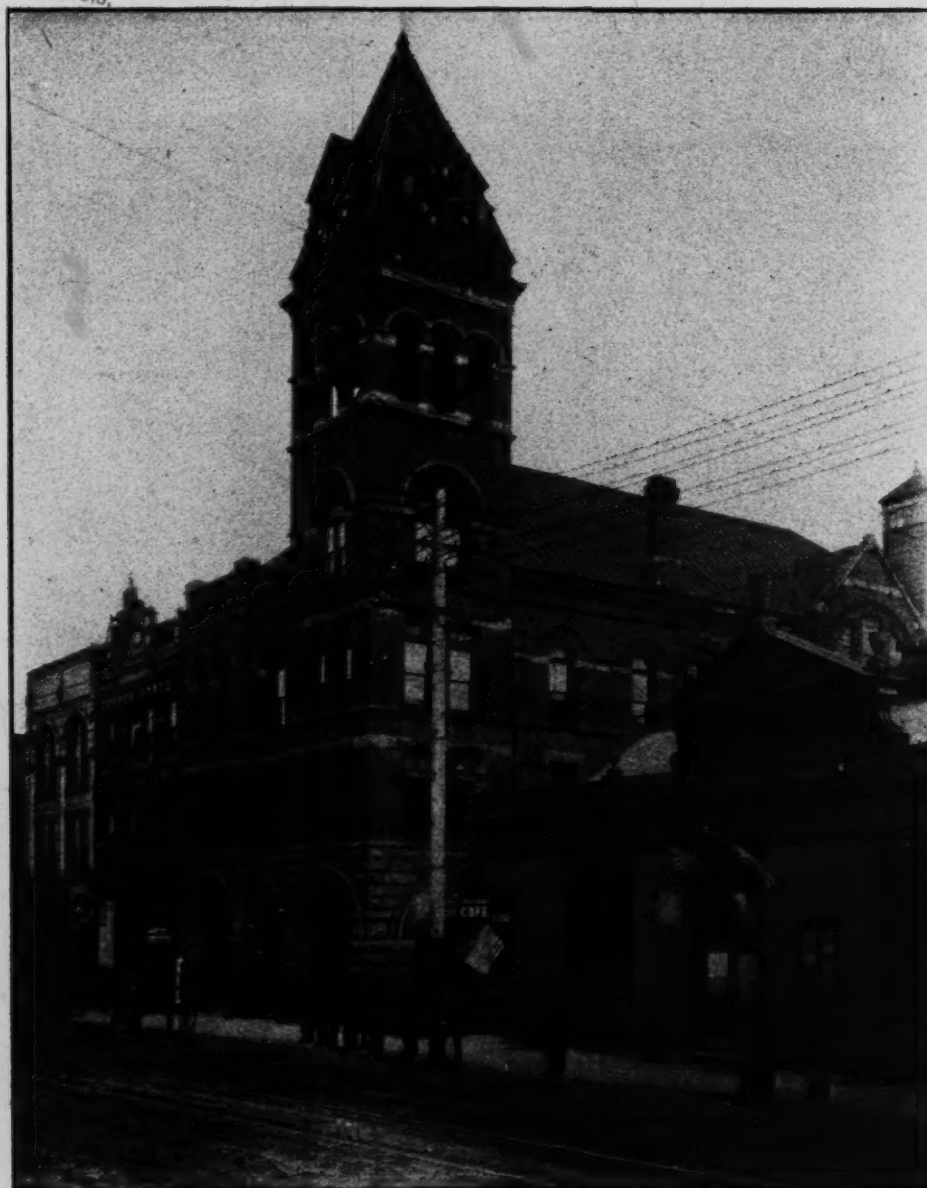
TOTAL PRODUCTION OF PRECIOUS METALS IN MONTANA DURING THE
CALENDAR YEAR 1898.

Description.	Quantity.	Value.
Gold, fine ounces	253,967.757	\$5,247,912.91
Silver, fine ounces, (coinage value)	14,818,061.99	19,159,432.17
Copper, fine ounces, at \$12.00 per cwt.	216,979,354	26,102,616.29
Lead, fine pounds, at \$3.78 per cwt	21,403,392	809,065.78
Total value of production		\$51,319,067.15



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The Expenditures of Operation.

The following figures giving in detail the expenditures of operating mines on an extensive scale, will be of interest to those who desire to inform themselves in this line, and will also give a clearer idea of the mining operations in Montana.

	Syndicate Group	Anaconda Group	Total	Per Ton (Cents)
Assay expenses and salaries	\$4,881	\$4,435	\$9,316	0.6
Candles	22,681	18,080	41,761	2.9
Electric light	8,321	4,595	14,916	1.0
Coal	117,501	90,380	207,881	14.3
Expenses	10,934	9,355	20,289	1.4
Freight on ore	263,946	106,135	452,081	31.0
Fuse and caps	16,943	10,023	27,004	1.8
Labor	1,025,931	1,550,571	2,576,502	231.4
Legal expenses	7,300	18,981	26,281	1.8
Mess expenses	1,687	2,436	4,123	0.3
Oil	9,928	7,041	16,979	1.2
Personal injuries	12,856	17,558	30,414	2.2
Powder	81,359	65,987	147,346	10.1
Precipitating expenses		6,110	6,110	0.4
Precipitating labor		19,012	19,012	1.3
Precipitating scrap material		9,030	9,030	0.6
Salaries, including management	54,106	42,172	96,278	6.8
Stable expenses	2,857	3,185	6,042	0.4
Sundry supplies	25,980	20,674	46,654	3.3
Taxes	25,400	20,400	45,800	3.2
Timber	248,123	181,754	429,877	30.5
Tools and utensils	20,500	16,984	37,484	2.6
Water	11,205	11,005	22,210	1.5
Repairs—				
Building and structures	573	1,975	2,548	0.2
Machinery and plant	177,489	208,023	385,512	26.1
Construction—				
Building and structures	34,070	61,220	95,290	6.8
Machinery and plant	95,567	97,513	193,080	13.8
Deduct one-half of profits of subsidiary departments	\$3,059,213	\$2,086,571	\$5,145,784	393.8
Total			\$241,561	16.6
Net cost			\$6,503,923	377.2

The average cost for mining per ton of ore was, therefore, \$3.94 actual cost, or \$3.77 net cost, after deducting profits of subsidiary departments.

The following table shows the details of expenditure at the reduction works for the year:

	Amount.	Per Ton (Cts.)
Custom ores	\$164,298.29	11.8
Concentrating	1,124,596.96	77.0
Smelting	2,510,268.98	192.6
Converting and casting	1,072,933.95	78.6
Blast furnace	390,105.94	28.4
Refining	603,123.77	41.4
Reduction of silver mud (slime from electrolytic plant)	73,467.10	5.0
Melting (construction)	10,125.76	0.7
Totals	\$6,249,989.67	425.3
Deduct one-half of profits of subsidiary department	241,561.62	16.6
Net cost	\$6,008,007.65	411.7

The cost of treatment was \$4.23 per ton actual cost, or \$4.12 per ton net cost, after deducting profits of subsidiary departments.

The net cost of mining and treatment was, therefore, \$7.89 per ton of ore. The average yield was \$11.22 per ton, showing a profit of \$3.33 per ton.

The income account, condensed, is as follows:

Sales of product	\$18,254,849
Profits of subsidiary department	483,723
Royalties, rents and dividends received.....	79,285
Total	\$18,817,857
Mining expenses	\$5,745,784
Reduction works	6,249,939
Freights, railroads and ocean	906,296
Refining charges at seaboard	968,891
Interest on advance	34,900
General expenses, New York	102,638
Decrease in metals on hand	1,468,161
	\$15,206,611
Balance profit for the year	3,651,246
Dividends paid, 10 per cent on stock	2,000,000
Surplus for the year	551,246
Add surplus July 1, 1897	5,044,563
	\$4,195,909
Balance June 30, 1898	

The items of sales of products were: Copper, \$14,605,589; silver, \$3,237,278; gold, \$411,985; totals, \$18,254,849. The value of metals on hand and in course of treatment on June 30, 1897, was \$5,521,031; on June 30, 1898, it was \$4,052,870; a decrease of \$1,468,161, as above. The total quantity of ore treated since the first opening of the mines in 1880 has been 9,614,263 tons. The total product has been 550,962 short tons copper, 40,658,103 ounces silver and 135,244 ounces gold. The coining value of these amounts of gold and silver are \$2,795,741.60 and \$52,568,052.36 respectively. The value of the copper at the average price of \$12.50 per hundred weight is \$137,740,500. The total value of the yield from the mines of this company to date has therefore been \$193,104,293.96. The average yield has been therefore, 5.73 per cent copper, 4.23 ounces silver and .014 ounces gold to the ton.

Promising Mining Districts Now Being Developed.

The territory covered by the ceded strip of the Blackfeet Indian reservation, is a new mineral district that was added to the others of the state a couple of years ago through its purchase from the Indians by the government and opened to location under the mineral act. At the time of the opening there was a rush of prospectors and about one hundred quartz claims were located, the great majority of which were made on two parallel fissure veins that cut the precipitous mountains in a north-west and south-easterly direction from Divide mountain to Grinnell mountain, a distance as the crow flies of over ten miles. These veins are distinctively marked, as they cut cleanly through every formation and leave the vein matter visible above the shale covering of the lower portions of the mountains. The mountains of this district are very precipitous, ranging from 8,000 feet altitude above sea level to 12,500 feet.

Since the location of the claims mentioned, the majority of them have been placed in two groups, the two covering about all the locations made on these fissures.

One firm is running five tunnels located at different points best situated to develop and demonstrate the mineral value of about fifty claims that are under their control, and at this writing these tunnels are in approximately about 250 feet, but in no instance have as yet secured permanent mountain (thermal) water. The indications are, however, that exceptionally valuable mines will be developed when sufficient depth is secured. On Canyon creek one tunnel has secured a length of over 400 feet and are now in a high grade of clean concentrating ore, and as the surface indications, formation and vein filling is identical in all the mountains cut by these leads, there is little question that the same results will be secured with similar depths.



ON THE "CEDED STRIP,"—TETON CO.

The vein matter is an unstratified diorite and is all more or less mineralized, and on the surface, in places, shows very rich mineralization with bornite and pyrites of copper and carrying varying values of gold and silver. In the development secured throughout the district some fine ore has been revealed and many quartz streaks encountered that cut irregularly through the vein matter, and are composed of quartz, spar and practically pure metal. All of the vein matter carries iron varying from 5 to 30 per centum. The leads on which the development is in progress will vary from 15 to 40 feet in width. If the anticipated rich deposits of copper ore are revealed, as seems entirely probable, it is likely to be reduced in the immediate vicinity, as Nature has provided every economical facility. If the district turns out as anticipated and

warranted by all the surface indications and the revelations of the slight development so far secured, it will materially add to the output of mineral wealth of the state.

During the past year and a half there has been a good deal of development done in the Copperopolis district, Meagher county, with the most gratifying results. Development shafts are now down about 650 feet and at that depth the drifts and cross-cuts have encountered large bodies of rich copper ore. Ore was taken from the surface and down to a depth of about one hundred feet away back in the sixties, when the ore had to be taken overland to the Missouri below the falls and then down the river to Omaha, and notwithstanding this tremendous cost for transportation a profit was left. The installing of machinery was too heavy a cost, however, so that when the hand-made whim reached its limit and depth demanded heavy and modern machinery, the mines were abandoned. Activity was not revived in the district until a little over a year ago, but since that time work has progressed steadily on several properties and the appearances are that Copperopolis is going to be an important mining camp in the very near future.

What is known as the West Fisher district in Flathead county, has been attracting considerable attention the past year and development has been done on a considerable scale with more than encouraging results. There are several small mills running and they are proving an entire success. The leads are well defined and the gold ore is steady in its values.

Silver Camp, just across the main range in Lewis and Clarke county, has had a half dozen properties in course of development for the past two years, and the ore that is now being discovered is proving that the faith of those who have been interested in the camp was fully warranted and that the preliminary expenses of development, though they have been considerable, will soon be repaid. The ore carries gold, silver, lead and copper.

The Copper Lake district in the Stone Wall range, also in Lewis and Clarke county, is being developed and promises well.

The Sheep Eater and Boulder districts of Park county have also had a large amount of development done on various properties during the past year, and those who are investing their capital in them are doing it with the utmost confidence and with the apparent assurance of permanent and profitable returns. The properties in these districts are gold and lead bearing.

These are undeveloped districts that are now being developed on a considerable scale, but there are thousands of properties throughout the mineral area of the state that are being developed in a more or less energetic way, depending in great part on the financial ability of those controlling them. These districts, as well as the older districts, and the single properties mentioned, offer a field for the most profitable investment of new capital. The great fortunes that have been taken from the ground in this state are the reward of those who had the good judgment and the determination necessary to the undertaking of mine development. Montana has thousands of as good opportunities not yet taken; the history of fortune-making of the past, will be often re-enacted in the Treasure State.

In the introductory of the very comprehensive report of State Mine In-

spector Mr. John Byrne, he says: "A quarter of a century ago little was known of the mineral resources of the State of Montana. At that time, gold, silver, lead and copper had been discovered, but little had been done in the way of their development other than the securing of gold from the placer deposits and the most superficial prospecting of quartz leads. Much was hoped for in those early days but the most sanguine never dreamed of such accomplishments as the period since that time has witnessed. The growth of the mineral industry has been little short of fabulous and, while the achievements have been truly marvelous, the industry is only yet in its infancy. Each succeeding year not only reveals new deposits of marketable minerals, but with it also come improved methods for the winning of the treasure from the bosom of Mother Earth that increase former products and so cheapen them as to permit of competition with the most favored of other countries of the world. Already our copper has dominated the foreign markets, and the keen-sighted capitalists of the old world, recognizing our superior advantages in the possession of wonderful properties are coming here to take part in the great task of mining and manufacturing so as to be upon an equal footing with the enterprising and vigorous American."

No other state has made such strides in the production of copper as has Montana. Twenty or twenty-five years is indeed a brief period as compared with the efforts of other copper districts, but it has been long enough to make the name of Montana famous in all lands, and one that must redound to our future growth and even more rapid development.

Few residents of Montana, however, have anything like a proper conception of the greatness of their own state from a mineralogical point of view. Even those who live among the mines would be surprised at the volume of business annually done. They see the train loads of ore going out day after day, but pay little attention to them. They see the corded piles of copper plate and pig being loaded for transportation to market, but they seldom stop to compute the value." He then calls attention to the enormous mineral output of the state and to the fact that its output of copper is nearly one-quarter that of the world and nearly sixty-one per cent of that of the continent, and quoting the figures he continues:

"These figures point the source of Montana's "full dinner pail," and they as well demonstrate that as long as the advance of civilization demands the extensive use of these metals, conditions may bring periods of depression to other states, but Montana will not feel their detrimental influences.

"Copper is now produced in Beaverhead, Deer Lodge, Granite, Jefferson, Madison counties, and Lewis and Clarke and Teton promise to become important in this line, but Silver Bow is distinctively the copper county of the state.

"In the mining of its mineral Montana gives employment to a large army of men, while in the collateral industries and associated with the transporting of the product to market thousands of people are employed. The capital invested in the industry is enormous. It is not an easy matter to correctly estimate it because of the many changes constantly taking place.

"There is yet a vast territory in the state to be explored and prospected

for the marketable minerals. In the copper-bearing formations of the Rockies and branch ranges there are large tracts upon little which in this line has been done.

"The rapid growth of the great mining industries demonstrates the enterprise and energy of those whose capital and energy have in such short time placed Montana in the front rank of mineral producing districts of the world.

"While Montana has not the deepest shafts, it has the richest ore and the greatest abundance, and its mines and mills and smelters are equipped with the most modern machinery and every mechanical device of convenience and economy that native or foreign ingenuity can conceive.

There are several districts of the state where the ores are heavy with zinc, and as there are no smelters here especially adapted for the reduction of such ores, the development of these mines has been retarded by the zinc penalties levied on the treatment by the precious metal smelters, and Mr. Byrne treats this matter as follows:

"During the past two or three years there has been more attention paid to the value of zinc ores and to the study of processes for their profitable treatment. The American Smelting and Refining Co. is now adding a department to its Salt Lake plant, for the treatment of these ores, and plans are now being drawn for a plant of the most approved type for the exclusive treatment of zinc ores that will be in operation in this state in the course of the next year. This is of more than passing importance to the state, as there are several districts within its boundaries where the ores, while carrying good values of the precious metals, and in several instances a large percentage of copper, are temporarily rendered valueless by reason of the high charges made at the smelters in the form of zinc penalties. With the operation of this plant, however, these penalties will disappear and in their stead the zinc will be a value to add to the united worth of the ores. Zinc ores are found in immense quantities in Jefferson county, and the establishment of a plant that will handle its ores will enable that county to come rapidly to the front as a mineral producer. There are a number of mines already opened in this county, such as the Comet, near Boulder, the Alta at Wickes, the Grey Eagle and a number of others, that have an abundance of this class of ore ready for shipment and are in condition to continue the production for an indefinite period.

"Speaking of the complex ores carrying zinc in considerable quantities, and which are excluded from treatment in the ordinary precious metal smelters on account of their choking effects and the fact that they render the slag less fusible and as a consequence retain appreciable quantities of the precious metal values, Benjamin Sadtler calls attention to the fact that they cannot be successfully treated in the ordinary furnace for the distillation of zinc, as they usually contain so much iron and lead, which corrodes and destroys the retorts. The characteristic zinc product of the precious metal mines is of the variety known as marmatite containing so much as a component part that it cannot be separated by any of the usual magnetic processes. Ores treated with the Sadtler process run, in the raw ore, from 16 to 30.5 per cent iron, 1.5 to 12.89 per cent lead, 2 to 9 per cent silica and 16.5 to 37.5 per cent zinc, silver 5 to 17 ounces, gold \$1.00 to \$11.00. In tests made at the Colorado smelter at

Butte the zinc recovery ran from 70 to 84 per cent, a sufficient percentage to justify the assumption that a large and modern zinc furnace, using these re-torts, would save the ordinary 85 per cent which is considered a good average result. The cost of the process is simply that of ordinary zinc roasting and distillation plus the cost of from eight to twelve cents each for lining the re-torts, and this expenditure is more than offset by the extended life of the re-torts.

"The profit arising from this class of ores comes from the fact that they can be produced at a lower rate than the pure zinc ores of Missouri and other distinctly zinc districts, because of the gold and silver and other valuable metals contained making it a very profitable product.

"The highest wages have always been paid in Montana, and this, together with every modern convenience and safeguard, have attracted the best miners from the mining sections of the world, and these have made a contented and prosperous people who are enjoying the benefits made possible through the activity of these immense properties. The best of schools are open to the youth of our mining districts, and the towns contain fine public libraries, have modern improvements of sanitary and other kinds, and thrift and home adornment is to be seen everywhere.

The U. S. Assay office of Helena estimates that the gold output of the state for 1900 will be 248,000 ounces, and the silver 16,750,000 ounces.

The Engineering and Mining Journal gives the following summary of the metallic product of the United States for 1900. This summary has been compiled from advance figures furnished by producers and from official sources, and gives a complete statement of the gold production of the world for the year just closed.

The total value of the metals produced in the United States in 1900 was \$509,800,992, as compared with \$446,057,320 in 1899. The value of the output of non-metallic substances was \$755,680,991, as against \$645,754,305 in 1899. The total value for the two years, after allowing for duplications, was, respectively, \$1,157,162,182 and \$1,049,230,589. The more important items of this production in metals were, gold, valued at \$78,658,755; silver, valued at \$37,085,248; 615,756,802 pounds of copper, valued at \$100,154,345; 251,784 tons of lead, valued at \$22,005,659; 122,850 tons of zinc, valued at \$10,786,230, and last, but not least 13,914,505 tons of pig iron, valued at \$238,078,737.

Of the non-metallic products, by far the most important was coal, of which the United States produced no less than 274,847,779 tons; the greatest quantity ever produced in one year by this or any other country. In 1899 the United States was the largest producer of coal in the world, and this pre-eminence was increased in 1900.

Other important products of this class included cement, of which 187,728 barrels were made; salt, copper, sulphate, mineral paints, phosphate rock and slate, while the minor mineral products included a variety too numerous to mention.

The gold production of the world, for 1900 amounted to \$256,462,438 which compares with \$313,641,534 in 1899, the decrease being entirely owing to the stoppage of gold production in the Transvaal by the war, nearly all other producing countries showing an increase. In 1900 the United States took the lead among the gold producing countries, with \$78,658,755; Australia, ranking second with \$75,283,215. The large production of the Klondike has put Canada in the third place, with a total output of \$26,000,000 while Russia

was fourth with \$23,090,862. These four countries produced over 80 per cent. of the gold of the world.

The total amount of dividends paid by 210 companies allied with the mineral industries in the United States was \$130,554,000. This large disbursement places mining among the most profitable of the country's industries. The metal mines paid \$51,502,000, or 39.3 per cent of the total, and the industrial companies \$79,439,000, or 60.1 per cent.

Among the leading payers were the copper companies, the gold and silver mines, \$13,907,000, and the petroleum companies, with \$48,816,000.

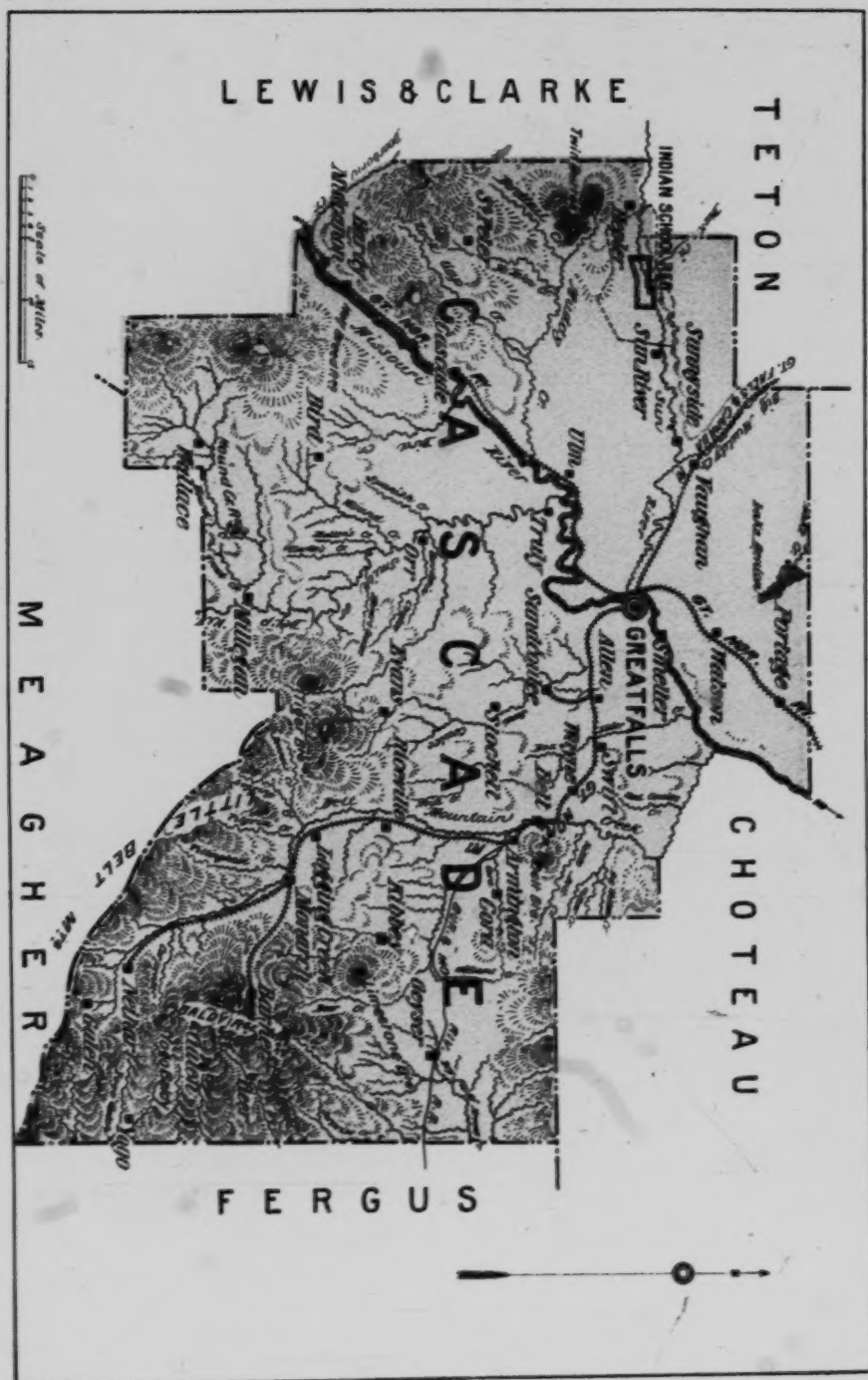
The following are the figures of the copper production of the world for 1899, as secured by the Engineering and Mining Journal:

	Long Tons.		Changes.	Per Cent.
	1898	1899		
Algeria	50	6,400	D.	570
Argentina	125	.....	D.	50
Australasia	18,000	68	D.	60
Austria-Hungary	1,540	20,750	I.	2,750
Bolivia	2,050	1,500	D.	35
Canada	8,040	2,500	I.	450
Cape of Good Hope	7,000	6,723	D.	1,308
Chile	24,850	25,000	I.	150
Germany	20,000	22,400	I.	2,375
Great Britain	550	650	.....	.....
Italy	1,425	2,000	D.	425
Japan	25,175	27,500	I.	2,325
Mexico	15,668	2,700	I.	600
Newfoundland	2,100	19,235	I.	2,607
Norway	2,615	2,610	D.	5
Peru	2,040	5,165	I.	2,125
Russia	6,000	6,000	.....	.....
Spain and Portugal	63,235	53,730	I.	405
Sweden	480	530	I.	40
Total foreign	195,088	208,002	I.	12,574
United States	229,241	205,154	I.	25,915
Totals	424,329	472,819	I.	38,489
Totals, metric tons	441,378	481,359	I.	40,121

The following is a list of mines that have secured a depth of over five-hundred feet:

Name of Mine.	Depth.	Name of Mine.	Depth.
Anaconda	1,900	Blue Jay	1,975
St. Lawrence	1,600	Berkeley	900
Never Sweat	2,000	Colusa-Parrot	1,400
High Ore	2,200	Stewart	1,000
Bell	1,650	Original	1,200
Diamond	2,200	Rarus	1,300
Green Mountain	2,200	Nipper	800
Mountain Con. No. 1	2,000	Minnie Healey	800
Mountain Con. No. 2	1,500	Alice	1,500
Buffalo	1,600	Blue Wing	650
Little Minah	900	Magna Charta	700
Parrot	1,000	Ella	800
Moonlight	1,300	Speculator	1,300
Pennsylvania	1,400	Drum Lammion	1,600
Mountain View	1,700	Mayflower	900
Leonard	1,300	Kennet	600
West Colusa	1,300	Granite	1,000
East Colusa	900	Bi-Metallic	1,700
Gagnon	1,800	Hope	800
Silver Bow No. 1	1,000	North Pacific	500
Silver Bow No. 2	575	Carbon Coal Co	900
East Grey Rock	1,000	Eva May	800

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Assessed Valuations.

Real, \$9,173,448; personal, \$3,030,249; railroads, \$919,084; total \$13,122,821.

Great Falls and Cascade County.

Precious Metal and Coal Mining, Smelting, Water Power, Agriculture and Stock Raising, Some of the Resources that Make This One of the Foremost Counties of the State.—The Greatest Available Water Power on the Continent and One of the Most Modern and Largest Copper Refining and Reduction Works in the World.—A Wealth of Resources and a Multitude of Opportunities That Are Yet to be Taken—Great Falls to Become the Manufacturing Center of the West.

Cascade County was created in 1887 from parts of Meagher, Lewis and Clarke and Choteau counties, its area at that time being about 2,600 square miles. Since it was formed, there have been added to it from the northern slope of the Belt mountains 800 square miles, mostly mineral country, thus making a total area of 3,400 square miles. It has a population of 25,777 as against 8,755 in 1890, and is now the second county in the state. It is made up of mountains, table-lands and valleys. Besides the Missouri river, its principal streams are the Sun, the Smith, the Belt and the Highwood, all of which discharge their waters into the Missouri near Great Falls. Its altitude below the lower falls of the Missouri is 2,800 feet, while the altitude of Neihart its most elevated town, is 5,600 feet. The annual rainfall over the table-lands between the Missouri river and the base of the Belt mountains is from eighteen to twenty inches. Standing upon almost any plateau in this county, one can see five distinct ranges of mountains all of which are more or less heavily timbered with fir and mountain pine, while the broad-leaf and pin-leaf cottonwood grow luxuriantly in its valleys. The water in all its rivers as well as that which comes from its springs is pure and healthful. Its climate in summer is delightful as it is seldom excessively hot, while its winters, though sometimes cold, are of short duration, as this county appears to be in the direct path of the chinook winds.

The natural resources of Cascade county consist of rich agricultural and pastoral lands, water-power, coal, iron, gold, silver and lead. To these may be added fire-clay, cement rock, gypsum and lime of great purity, mountain masses of almost pure silica and building stone in many colors. Twelve years ago, scarcely half a dozen men in this county believed that any of its lands could support a farming population without a system of irrigation, but there were one or two men who were willing to try the experiment and so successful were they in growing crops of wheat, oats and barley on the table-lands, that others at once began to make settlement upon these high-lands and to engage in farming. To-day, there is a large and thrifty population of farm-

ers occupying much of the table-land country between Great Falls and the Belt mountains, and between Smith river and the eastern boundary of this county. The men who have cultivated these lands the past decade have never failed to secure profitable crops of grain and potatoes, the yields of the past year having been the smallest on record. The average annual yield of wheat per acre for the ten years in which farming has been carried on here without irrigating ditches is conservatively placed at twenty bushels. The farmers who have summer-fallowed their lands and have plowed deep, have



SCENE IN A GREAT FALLS PARK.

annual average records of twenty-eight to thirty bushels of No. 1 hard wheat carrying from fifteen to sixteen per cent of gluten. While excellent crops of timothy are grown upon much of these lands, they appear to be especially adapted to the production of alfalfa and Austrian brome. Although alfalfa under irrigation will yield from three to four crops in Montana between June and the first of October, one or two heavy crops can be grown yearly upon these uplands without irrigation.

Since 1890 sufficient experimental work has been done in fruit culture here to clearly prove that not only many kinds of small fruit can be grown abundantly in Cascade county, but that apple orchards may be successfully maintained in many parts of the county. Horticulture which has hitherto been

entirely overlooked in this part of Montana will in a few years become an important branch of farming.

The ability of the farmer to raise excellent crops here is largely due to the fact that the lands of this county consist of a mellow, sandy loam of about eighteen inches in depth, resting upon clay which acts as a reservoir in holding moisture. This friable soil easily permits the roots of grain to penetrate



RAINBOW FALLS—GREAT FALLS.

to a great depth, and to support crops during periods of drouth. The great advantage of deep plowing and of thoroughly pulverizing the surface soil has been well demonstrated by some of the farmers of this part of Montana who claim that thorough and careful farming amply compensate for lack of rainfall in this country of cool nights. Damp, hot weather and consequent blight which often destroy or greatly reduce the yield of wheat in the upper Mississippi valley are never known on the eastern slopes of the Belt mountains.

Among the foothills and on the table-lands that skirt the Belt and High-

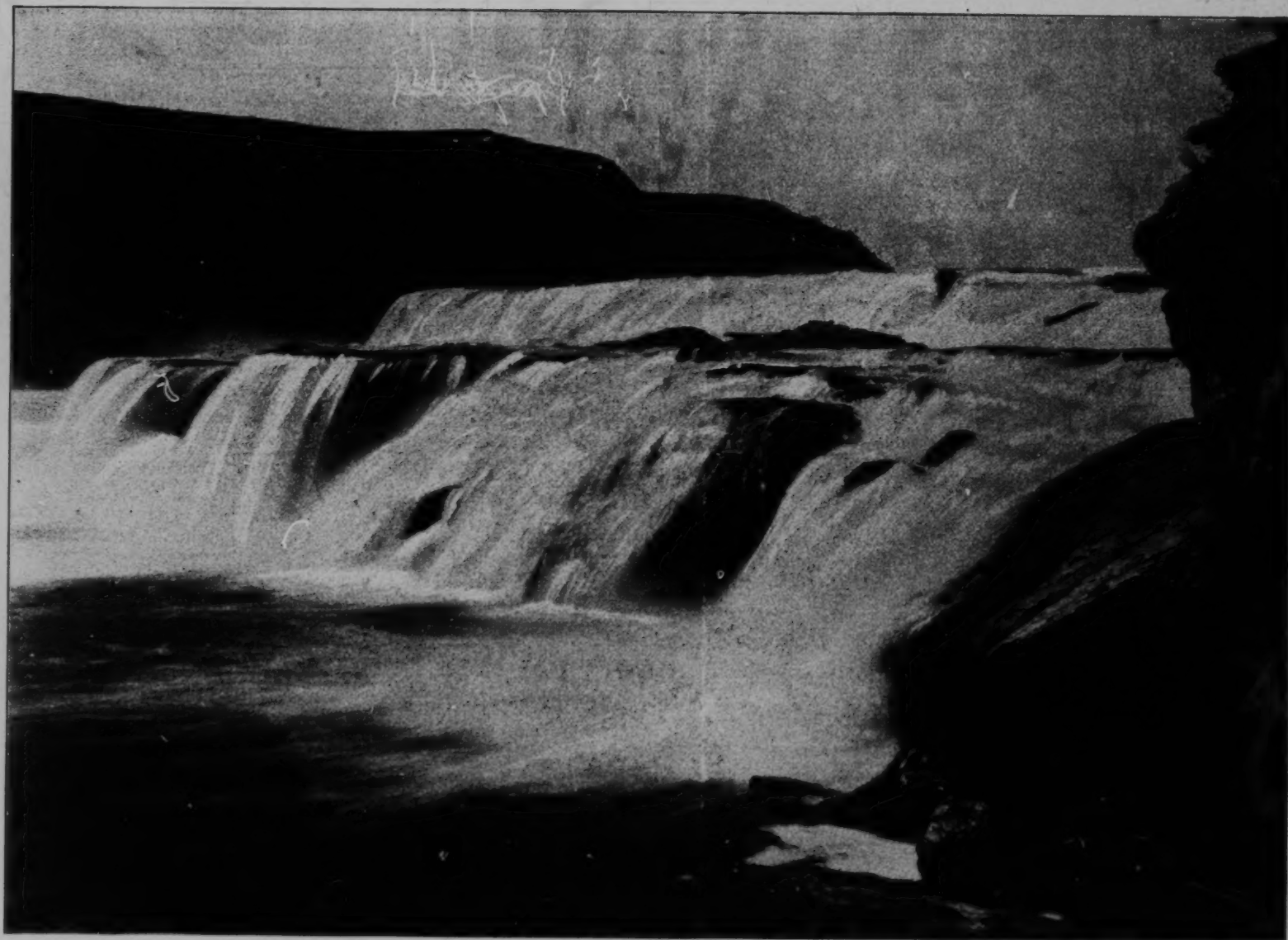
wood mountains the most favorable conditions exist for the prosecution of the dairying business. In no part of the world can be found sweeter or more nutritious native grasses and water carrying less impurities, while unlimited facilities exist here for growing root crops and for the production of forage plants suitable for the maintenance of the soil. Here nature has provided everything for the successful prosecution of this most important branch of husbandry. All that is required to place it on a firm basis and to make it a most productive source of wealth to Cascade county is the establishment near to its mountains of colonies from Denmark, Switzerland or Holland. The large and rapidly increasing demand for dairy products in this county is now supplied from dairy farms in the Mississippi valley. This means that a sum not less than \$350,000 is taken out from the yearly earnings in Cascade county for the benefit of dairymen in other states. The rapidly growing industries of this county will alone furnish a permanent market for a large part of its dairy products, however extensive they may become.

Bituminous coal underlies a large part of Cascade county, the principal centers being Belt, Stockett, Sand Coulee, Smith river and Hound creek. The districts where coal mining is actively carried on are Belt, Stockett and Sand Coulee. But little thorough prospecting has been done here to ascertain the extent of the coal measures, but from what is already known, the supply is sufficient to meet the demands of this region for a long time to come.

Iron ores are closely associated with the coal measures of Cascade county. They are found in different qualities extending from the Missouri river to the apex of the Belt mountains. The iron ores which generally underlie the coal measures according to the analyses of Prof. Dodge are partly spathic and partly hematite, and closely resemble the clay iron stone of England. These ores generally carry about forty per cent of iron. In the foothills and extending into the Belt mountains immense leads of red and brown hematite ore are found from the Smith river country eastward to the forks of the Judith river. Many of these leads are very wide and contain ores ranging from fifty-eight to sixty-eight per cent of metallic iron and are so low in phosphorous as to give them great value for steel making by the Bessemer process. All the essentials for steel making, such as Bessemer ores, manganese, coal, silica, lime and fire-clay are found here in abundant supply.

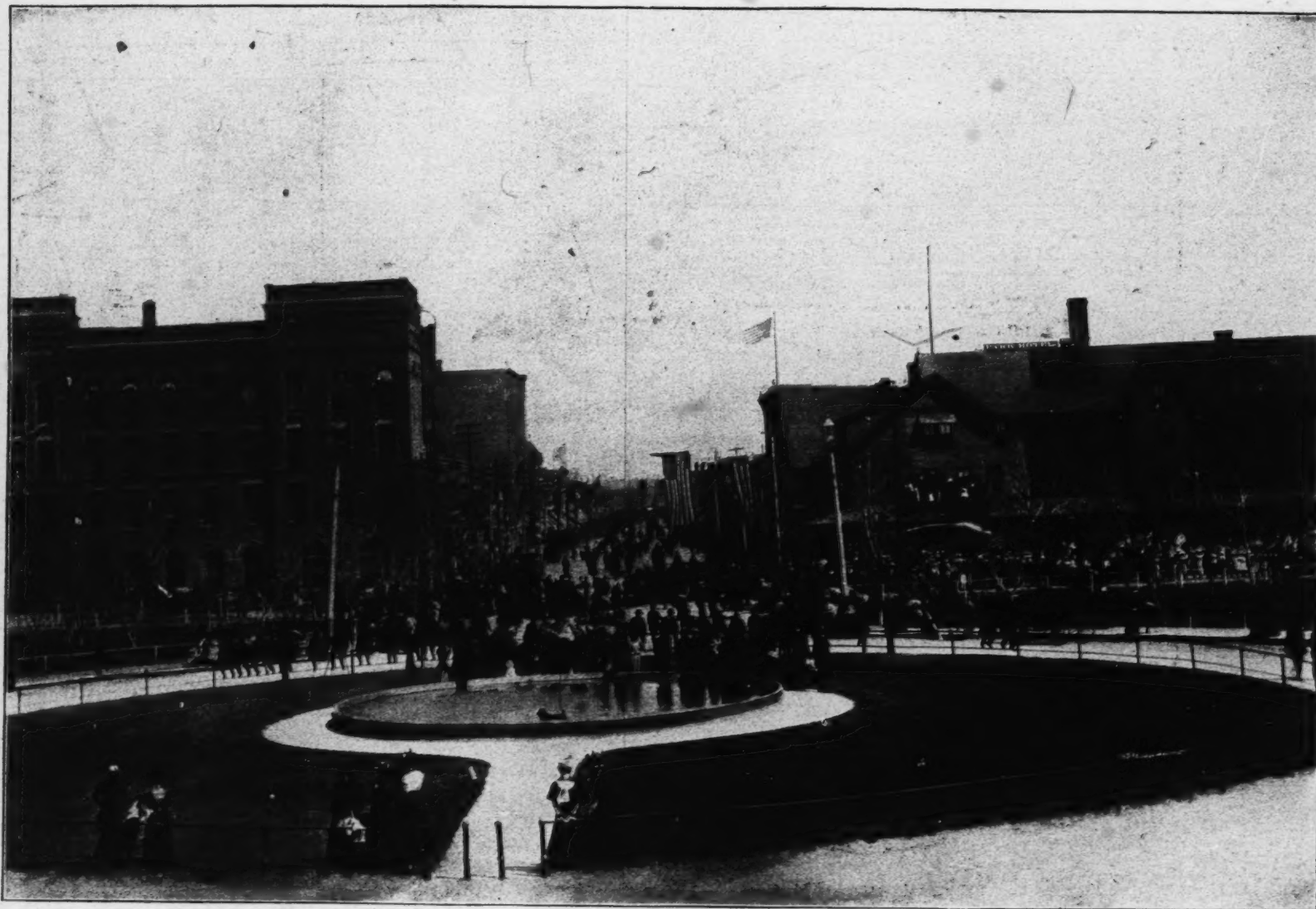
That part of Cascade county which carries its precious minerals extends from the Big Belt mountains eastward along the slopes of the Little Belt mountains to the north fork of the Judith river, a distance of sixty miles. This area includes the mining camps of Tenderfoot, Logging Creek, Dry Wolf, Running Wolf and Yogo, besides the well-known silver-lead mining towns of Neihart and Barker.

Neihart is the most prominent town in Montana that produces silver ore almost exclusively. Although the demonetization of silver has greatly restricted the output of ore in this district for several years past, recently, owing to greatly improved concentrating methods, silver mining here is assuming new importance. The ability to successfully concentrate the low grade silver ores of Neihart has resulted in the establishment here of a concentrator of six hundred tons of ore daily. This concentrator has been built by the owners



GREAT FALLS OF THE MISSOURI, 102 FEET HIGH—GREAT FALLS.

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CENTRAL AVENUE—GREAT FALLS.

of the Diamond R and Broadwater groups of mines, and is operated by water-power from Belt creek. Estimates are being prepared for another large concentrator soon to be located in this town near the Queen of the Hills mines. So successful are the present methods for treating Neihart ores, it is now absolutely certain that great and permanent activity will soon prevail here. The Neihart mining district will become one of the greatest and most enduring of the many mining districts of Montana. Work which had been suspended upon many of the well known mines of Neihart, such as the Diamond R has now been resumed, while the Florence and the Galt are being



ROYAL MILLS—GREAT FALLS.

operated with still greater activity. The Silver Belt, a mine carrying high grade sulphide ore, is now being rapidly developed by D. L. S. Barker, and extensive development work is being done on such gold and silver mines as the Big Snowy and the Ripple. While not more than three hundred and fifty men are now employed in the mining business of this town at the present time, there is every reason to believe that through the new activity given to mining by great concentrating works here employment will be afforded to a thousand men without twelve months.

The iron and manganese of Neihart and vicinity, although mined only in small quantities at present, will become of great value whenever the industry of steel making is established in northern Montana. There may be other districts in this state that are richer than this in steel ores and manganese, but as yet they have not been discovered. Neihart has telephone connection with

the principal towns of the state. It has an excellent electric light system, good schools and a large, well conducted hotel.

Barker, the most important lead-silver mining district in Cascade county has had an eventful history. Since the discovery of lead ores in this camp twenty-one years ago, it has been alternately very active and very dull. While the blow it received from the slump in silver greatly effected its output of ores, yet Barker has at times since yielded a great deal with more or less iron—thus making it a valuable flux for the smelters of Great Falls. Deeper mining will undoubtedly open up larger bodies of ore in Barker than have yet been discovered. The opinion is now held by many that when greater depth is reached in these mines, copper will take the place of lead, as in some of the mines the water holds a large per cent of copper in solution. This district is also abundantly supplied with iron ore. As the Montana Central road is extended into the heart of this mining district, it has ample facilities for the movement of its ore product. Concentrating processes will, before long, doubtless play an important part in the further development of this district.

The town of Belt situated in the valley of Belt river, is the second town in population in Cascade county. It is not only situated in the center of a rich agricultural country, but it is in the heart of one of the most extensive coal basins in this region. Its industrial and mercantile interests which are of much importance, have increased greatly in the past four years—much of its prosperity being due to the settlement of the surrounding country by farmers. Its great industry is coal mining and coke making which give employment to about one thousand men. This large business in coal mining is done by the Amalgamated Copper Company who ship the coal and coke product to the Anaconda copper reduction works. The plant at Belt owned by this company includes coal-washing machinery on an extensive scale and of the most improved type. The daily output at these works ranges from fifteen hundred to twenty-five hundred tons of coal and from one hundred to one hundred and fifty tons of coke. There are other coal mines in this town which are not operated regularly, and the output from which is at present small. This town has many well constructed mercantile buildings and its central school building is one of the best in the county.

The town of Sand Coulee where for many years was mined all the coal used by the Great Northern Railway Company from Grand Forks to the Cascade mountains, and a large part of the coal used in Great Falls including its smelters, is now being abandoned by the railway company, its field having been almost completely worked out. Much of the machinery employed here has been moved to Stockett, a short distance from Sand Coulee. It is probable that the entire coal mining plant at Sand Coulee will be removed away before the beginning of 1902. More or less coal mining will be carried on at this point by private companies, but the town will lose the most of its present population, and will cease to be the important industrial and commercial town that it was in 1890 and 1900.

The town of Stockett situated about three miles from the center of the worked out coal field of the Great Northern Company at Sand Coulee is now a very important and active coal mining town. About twelve hundred men are

employed by the Great Northern Company in and about the mines of this district, and the shipments of coal per day are from two thousand to twenty-five hundred tons. This town also has a large mercantile business, created by its own employes and by farmers who are occupying much of the surrounding table-land country. As there is a steadily growing demand for coal, the product of the Stockett mines will be increased, or new adjacent fields will be opened. The visitor to the town of Stockett is at once impressed with its great activity and with the volume of business transacted there. The mineral resources of Dry Wolf, Running Wolf and Yogo are such as to warrant great activity in those camps when a railroad is completed into the Judith Basin, along the base of the Belt mountains.



PARIS GIBSON'S STOCK FARM—NEAR GREAT FALLS.

The quarrying of sandstone for building purposes is becoming an important industry in Cascade county. Along the Great Northern railway as it passes through the valley of Sand Coulee are cliffs of sandstone in various colors fitted for structural purposes. The demand for this stone, although at present limited to a small area of country, is certain to find its way into new and extensive markets.

The manufacture of fire-brick, sewer pipe and tiling from the clays that underlie the coal and sandstone measures of this county, and the making of hydraulic cement are industries that will soon assume much importance here.

The agricultural and mineral resources of Cascade county are of much greater consequence than they could possibly be but for the great water-

power that is situated in the heart of the county where large forces of men are already employed in the reduction of ores, the refining of metals and in the manufacture of flour. Markets for the products of the farm and a short and easy haul for the ores from the adjacent mountains contribute much to the success of the farmer and the miner. The railways that lead to Great Falls from the mines of Cascade county, as well as from the copper mines at Butte



COMPANY POWER HOUSE-STOCKETT COAL CAMP.

have descending grades which make possible large trains and low rates of freight. A freight train started from Neihart without an engine would run into Great Falls, but for the hill at the town of Belt.

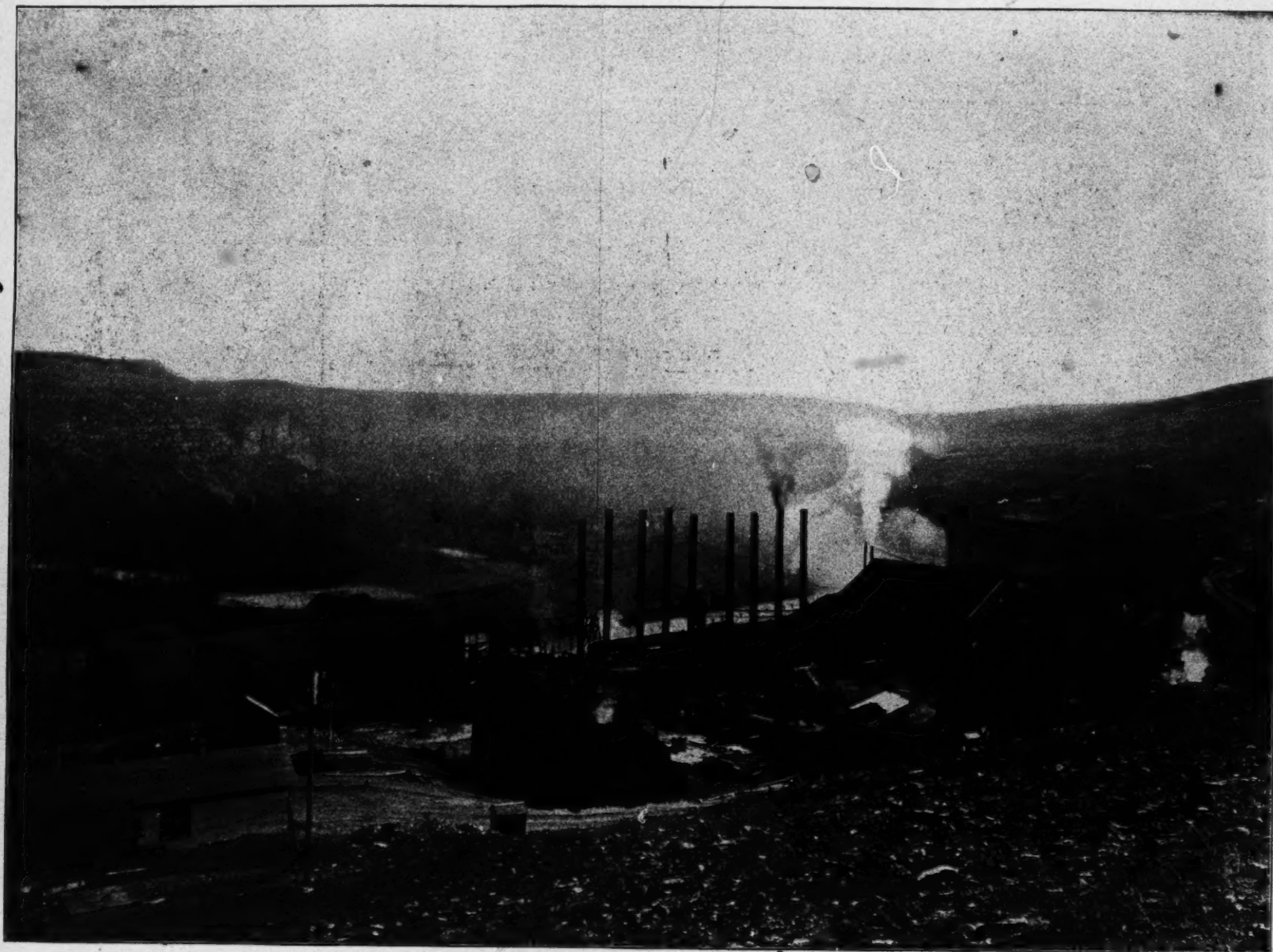
As the water power of the Missouri falls is the most important and far-reaching in its influence of the many resources of Cascade county, it is well to describe it as accurately as possible, and to refer to the industries already attracted to it as well as to estimate to some extent its value as a factor in the growth of this county.

This water-power is situated at a place easy of approach from all directions, being about forty miles from the point where the Missouri river breaks



BEEF CATTLE ON THE WAY TO A SHIPPING POINT.

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ANACONDA COMPANY COAL AND COKE PLANT AT BELT, CASCADE COUNTY.

through the "Gates of the Mountains." Its magnitude is commensurate with the resources of the surrounding country, as it is produced by a series of falls aggregating five hundred and twelve feet, which yield under a conservative estimate 340,000 horse-power at the medium low stage of the river flow. The magnitude of this power is best shown by comparing it with the power at Minneapolis which has 30,000 horse-power available, at a fair stage of water, or with Lowell, Lawrence or Holyoke which have about 11,000 horse-power each. This water-power in Cascade county is seven times as large as the combined water-power of the four large manufacturing cities referred to. It is fortunate for Cascade county and for the state of Montana that power can be produced at the falls of the Missouri in large quantities as its employment must for a long time to come be largely confined to the treatment of ores, and metals, including electrolytic works, which require much power as compared with textile manufacturing. If the power at these falls were no greater than that of Holyoke or Lowell, where light running machinery is operated, it would be already exhausted by the industries established here, but so great is this water-power that thirty industrial plants as large as the copper works of the Boston & Montana company can be supplied with ten or twelve thousand horse-power each. The comparatively small cost of installing power at these falls adds immensely to its value for industrial purposes. This is shown by the cost of developing power at the upper or Black Eagle Falls which did not exceed \$10.00 per horse-power as against \$100.00 per horse-power at Minneapolis and \$80.00 at Niagara Falls. All the power from Black Eagle Falls to the foot of the lower rapids can be developed at an average cost not to exceed \$8.00 per horse power. It can be readily seen that under this low cost of development, power can be sold in large quantities for \$5.00 per horse-power, per annum which is one-fourteenth the cost of steam power when produced from coal costing \$2.68 a ton.

The fall of the Missouri from the head of the rapids in the City of Great Falls to the foot of the lower rapids, as already stated, is five hundred and twelve feet. This fall is so distributed over a distance of ten miles as to make its development possible at several places at a small expense as compared with the cost if the installment were confined to one or two places. The solid stone walls within which the river is firmly held, and the compact stratas of sandstone over which the water flows the entire length of the falls contribute immensely to the development of the whole power at a small cost.

The industries already established at Great Falls and along this water power are the smelting of copper and lead-silver ores, the refining of copper, by which process the gold and silver are extracted, the making of flour and the transmission of electric power used in street railroad purposes and in city lighting, as well as in operating many small industries in different parts of the city of Great Falls. In these industries two thousand eight hundred and fifty able-bodied men are employed. If all the water power of the Missouri falls were used in industries similar to those now established here, it would require the employment of 100,000 men.

The treatment of common minerals and their use in various industries, the making of pulp from the timber of the adjacent mountains and valleys, and

the manufacture of paper, the making of aluminum from the clays of this region, and the manufacture of plate-glass from the high-grade silica near the water power, are industries requiring much power and which the conditions here greatly favor.

Flour-making, now in its infancy, in Montana, will assume great proportions at the falls of the Missouri as the tributary country becomes settled and the flood-waters of our mountains are brought upon the rich, but dry plains of north-central Montana, for the soils of all this region possess the qualities best adapted to the growth of hard spring wheat. The question of markets for Montana's flour product is being settled by the trans-continental railways that pass through the state, and that soon in connection with freight steamships now being built, will distribute in foreign countries all the surplus farm products of Montana, Idaho, Washington and Oregon. These facilities for marketing the agricultural products of the far northwest states will operate as a new stimulus for the development of agriculture in Montana whose farm products it was believed, until recently, could find no outside markets.

Great Falls advanced in population from 3,979 in 1890 to 14,932 at the last census, and is now the second city in population in Montana. It is the manufacturing and commercial center not only of Cascade county, but of a country now being rapidly occupied, which extends north to, and beyond the international boundary, and south to the Judith pass and the Big Snowy mountains. The rich valleys of the Sun river, the Teton river and the country drained by the tributaries of the Marias river are included in the commercial territory of Great Falls on the north, while the Judith Basin embracing an area as large as the state of Connecticut, a valley of unsurpassed resources, in soil, in minerals and native grasses, is a part of its tributary domain on the south and east. This country referred to, is among the most productive agricultural sections of Montana, and will soon be thickly settled with farmers. Great Falls is now the largest center for the receipt and distribution of merchandise in Montana, while its incoming and out-going freight cars average more than one thousand per day. The mercantile business of the city for 1900 aggregated nearly \$5,000,000, and the product of its mills amounted to \$12,500,000. Owing to its excellent mercantile and banking facilities and the ample arrangements afforded for the transfer, the storage and the shipment of wool, Great Falls has become the largest market for wool in the State, its receipts the past year having exceeded 9,200,000 pounds, valued at \$1,400,000.

It has an excellent system of schools which give employment to forty-seven teachers, there being two thousand six hundred and sixty pupils in attendance. It has six modern school buildings, the last one having recently been built at a cost of \$110,000.

Its park system embraces four hundred and fifty acres—the parks, seven in number, being so situated as to accommodate the future city. Of these seven parks, three in the heart of the city are being rapidly improved, and much experimental work has been done in them to determine what trees are best fitted to the climate and soils of this part of Montana. It is doubtful if any other city between Minneapolis and the Pacific coast towns is giving as

much attention to the subject of public parks as Great Falls. Not only is much time and money being expended here in the development of beautiful and thoroughly modern parks, but its residence streets and avenues are being made beautiful with grass plats and quadruple rows of elm and ash trees. If the work of establishing wide boulevards and parks in this city is continued, it will soon become a city of beautiful residences to which health seekers from the east will be strongly attracted. The contour of the townsite of Great Falls is such that when water by means of the power at the falls, is lifted upon the most elevated point within the city limits, it can be conducted by gravity through all parts of the city at a small expense.



A CARROLL COUNTY WHEAT FIELD.

The present water supply owned by the city is pumped from the Missouri river above the present townsite and is considered ample to meet the demands of double the present population of the city.

The public library also owned by the city, contains more than six thousand volumes. Land adjacent to the present library site has recently been acquired and the building is to be greatly enlarged the present year. Several of the thirteen church buildings in this city are to be enlarged and a number of new church edifices are to be built before the close of the year. There are two thoroughly constructed and well equipped hospitals here, one being under the control of the Sisters of Mercy, and the other under the control of the Methodist denomination.

The city has four banks with a capital stock of \$500,000 and deposits aggregating \$2,500,000.

In the field of newspaper work, Great Falls occupies a conspicuous place. The Tribune Company and the Leader Company both issue daily and weekly editions with full Associated Press reports. These companies are both

financially strong and the business of each is rapidly increasing and their influence is widely felt in the advancement of this city.

Among the industries of Cascade County heretofore mentioned, the two brewing and malting plants of Great Falls should be mentioned. Both the Montana and the American breweries are large institutions and are thoroughly modern in all their appointments. \$350,000 have been invested by these companies and the annual product amounts to \$300,000. The beer produced in Great Falls alone prevents an outflow of \$200,000 annually, from

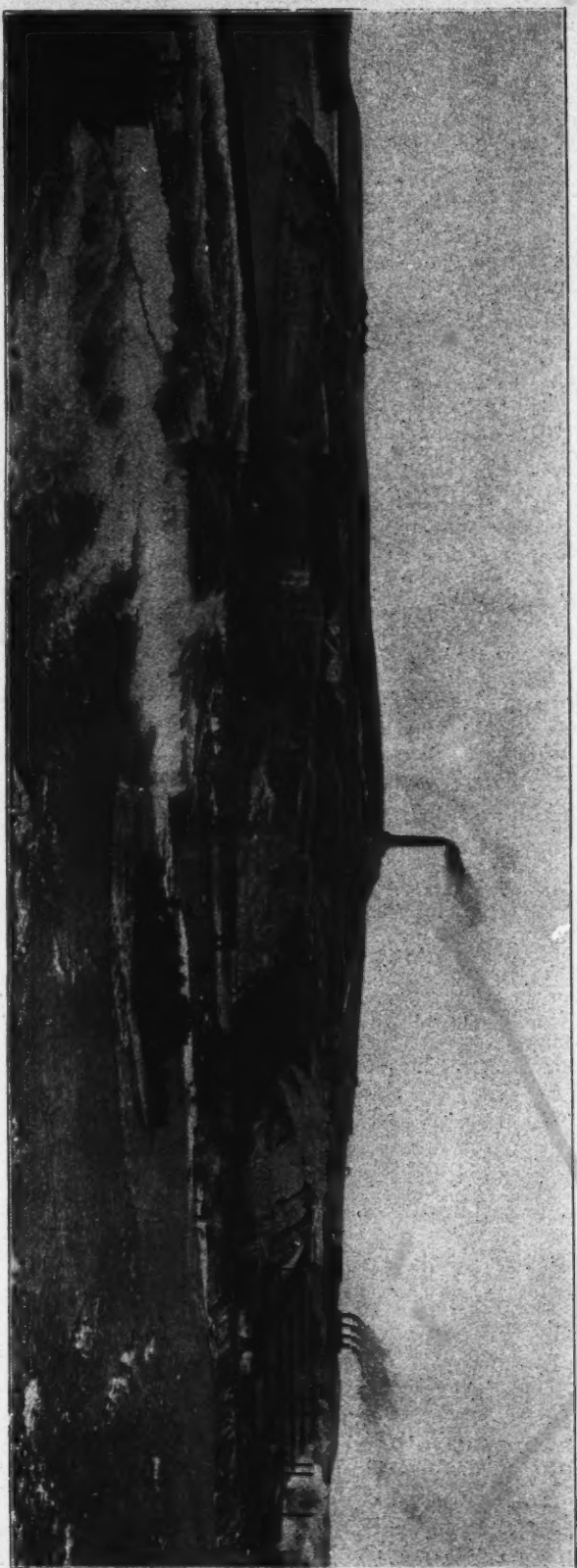


"THE GREATEST SILVER CAMP ON EARTH"—NEIHART, CASCADE COUNTY, MONTANA.

Cascade county, while the malting works are acting as a great stimulus to the production of barley on the table-lands of Cascade county.

The Port of Entry for Montana and Idaho is located in this city and a very large and rapidly increasing international business is transacted here, as this is a southern terminus for the Canadian railway lines.

The railways entering Great Falls are the Great Northern, the Montana Central (this being part of the Great Northern system) and the Great Falls and Canada railway, connecting Great Falls with the Canadian Pacific railway at Lethbridge, Canada. Although the Burlington and Missouri Company has not extended its line north of Billings, it has a route from Billings to Great Falls carefully surveyed, and it is confidently believed that this com-



BLACK EAGLE FALLS AND THE HOUSTON AND MONTANA COPPER SMELTERS, MILLS AND REFINERIES GREAT FALLS.

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pany will soon push its line forward to Great Falls in view of its large and rapidly growing commercial and manufacturing interests. The Bismarck, Washburn and Great Falls company have their road completed from Bismarck to Washburn, and it is understood that measures will be taken to extend the road westward at an early day into the Judith Basin, and thence to Great Falls. The magnitude of the water power of the falls of the Missouri and the productive capacity of the mineral and agricultural lands tributary to it, will make Great Falls one of the most important railroad centers in the west before the close of the present decade.

In entering upon the new year and the new century, Great Falls may be congratulated upon its rapid and substantial growth especially during the past year, and upon the bright future that awaits it. Being far removed from other industrial and commercial centers, its growth will keep step with the progress of its great tributary country, which is being rapidly developed.

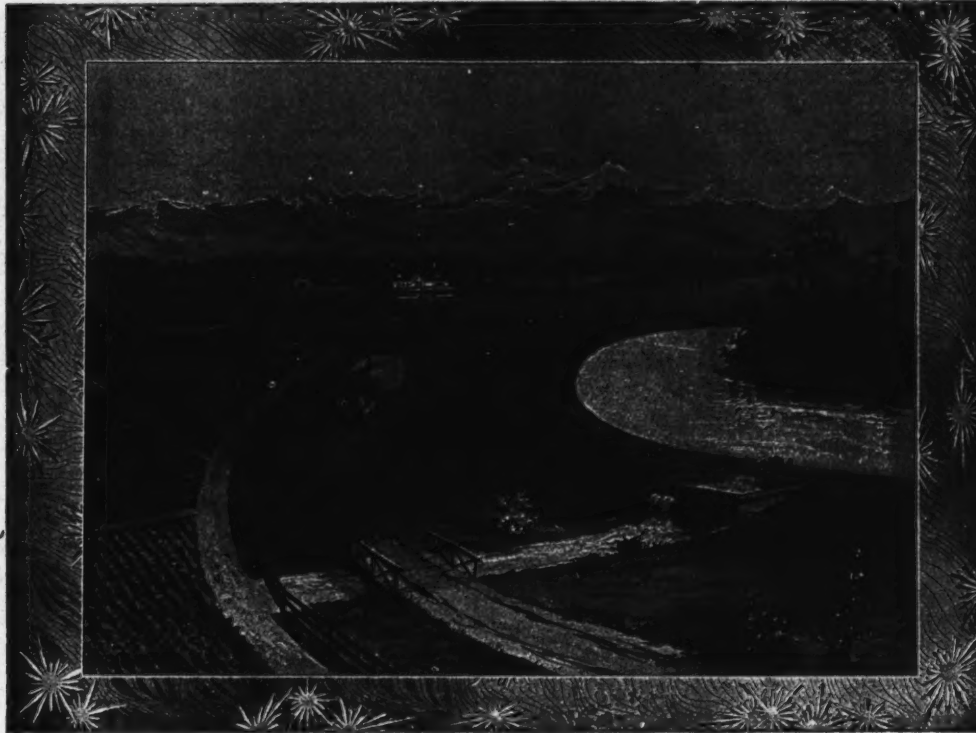
While the improvements in Great Falls during the year 1900 exceeded \$2,000,000, they will be largely surpassed by the improvements of 1901. It is estimated that from four hundred to five hundred dwelling houses will be built here during the present year as there are no empty houses to meet the pressing demand. The most thorough surveys of the water power at the group known as Rainbow, Colters and Crooked falls and complete plans have been made for the installment there of the entire power. This preliminary work has been done preparatory to the construction of a dam at the head of Colters falls by which the entire fall of one hundred and five feet can be made available for the production of power. It is expected this improvement will be completed before the close of the year. This development of power will, in a short time, add greatly to the pay-roll of Great Falls as it will be followed by the establishment of large electrolytic works and additional reduction works. The new railway route now being built from Portage Coulee into Great Falls and which after crossing the Missouri river above Rainbow falls, not only presents to the traveler grand and interesting scenery, but it brings the Great Northern road where the contemplated new industries will be established. A magnificent steel bridge costing \$100,000 will span the river at this point.

At the last county election, bonds were voted for the construction of a court house in Great Falls to cost \$200,000, and work upon it will be commenced early in the spring of the present year. The stone for this building will be taken from one of the quarries adjacent to the city. During the last session of congress a bill passed the senate appropriating \$200,000 for a federal building in Great Falls and it is expected the measure will be adopted in the house at the present session of congress.

Among the many improvements worthy of note that will be made here early this year is the building of four church edifices by the Catholic, Methodist, Presbyterian and Swedish Lutheran Societies, costing in the aggregate \$75,000. Work on the gas plant on ground at the corner of Sixth street and Eighth avenue north, will be commenced early in the spring and will be pushed rapidly to completion. This plant to be constructed upon the most approved plans, will be employed for heating as well as lighting purposes. The

Great Northern Railway Company will this year build a permanent freight depot to the wool warehouse, a distance of about eight hundred feet. This building will be of brick and stone and will be fire-proof. An entire block on Third avenue north, has recently been bought by the Ursuline Nuns who are about to establish an educational institution here which will be of much value to the state.

Nearly all the benevolent and protective societies in the land have chapters here, and ample accommodations have been provided for athletic sports.



AN IRRIGATED FARM NEAR GREAT FALLS.

One of the most interesting and attractive features of this city is the sheet of water made broad and deep by the uplifting of the sand stone strata in the Missouri river just above the old fording place, and near the present railroad bridge thus forming a natural dam. In this lake or widening of the river is a group of islands, six in number, named the "White Bear Islands" by Lewis and Clarke. This beautiful lake is admirably fitted for aquatic sports and will forever remain one of the attractive features of this city. Hitherto no good roads have been made from the hotels of Great Falls to the various objects of interest that are presented at the several falls and in the canyons of the Missouri river below the city, but as the Business Associations of Great Falls are agitating the subject of good roads around the city, it is hoped these natural objects of interest will soon be made easy of approach.

Although the industrial development of Cascade county began only ten

years ago, there are now employed in its various industries aside from farming, not less than 5,500 men. This employment of a large number of men while this county is young and with its resources in minerals and water power just touched upon, points surely to a time not far off when many more thousands of men will find employment in new and enlarged industries; and it suggests the importance of building up in this county farming and gardening on the largest scale possible in order that the cost of living to the mechanic and the miner may be greatly reduced, and that the money earned in the mills and factories may, as far as possible, be kept at home. Farming on an extensive scale throughout Montana is absolutely essential to the establishment of manufacturing interests here, commensurate with its great resources.



WATERING THE SHEEP.

"The Greatest Copper Camp on Earth."

Silver Bow, the Smallest County in the State, the Richest Mineral District in the World—Butte, the "Greatest Copper Camp on Earth," Founded on a Mountain of Copper—The Future of Butte Even Greater Than Its Past.

Within the little area of two miles from the center of Butte, more mineral wealth is produced every twelve months than is produced by the whole state of Colorado in a year.

Under this most remarkable place in the world, at once a noisy, bustling mining camp and a splendid metropolitan city, exists the very core of one of the most remarkable copper deposits ever discovered. On this is Butte founded. Yet not on this alone. In its development it has become a great trade center. Four lines of railroads give it facilities for carrying on its immense business, and the time is near at hand when, considered commercially and independent of the mines, it must become one of the most important cities in all the inter-mountain region.

Its permanency is assured. When its people ceased constructing little frame shacks and began to build substantial houses of brick and stone; when the most far-sighted of its business men began to invest fortunes in the construction of handsome business blocks and residences; when, in brief, they began to show confidence enough in the future to prove that they themselves intended to spend their lives here, there is no room for doubt as to the abiding faith of the people of Butte in its future.

That faith has been shown during the last few years in many ways. The lines that marked the former limits of the residence portion of the city have been extended in all directions, hundreds of handsome homes have gone up during the past year, and Butte enters the new century transformed.

The money on deposit in the banks of Butte amounts to more than twelve millions of dollars, and by far the greater portion of this belongs to the men who go down into the mines, who work in the mills and smelters and who assist in turning into the channels of the world the constant stream of wealth that flows from the hills.

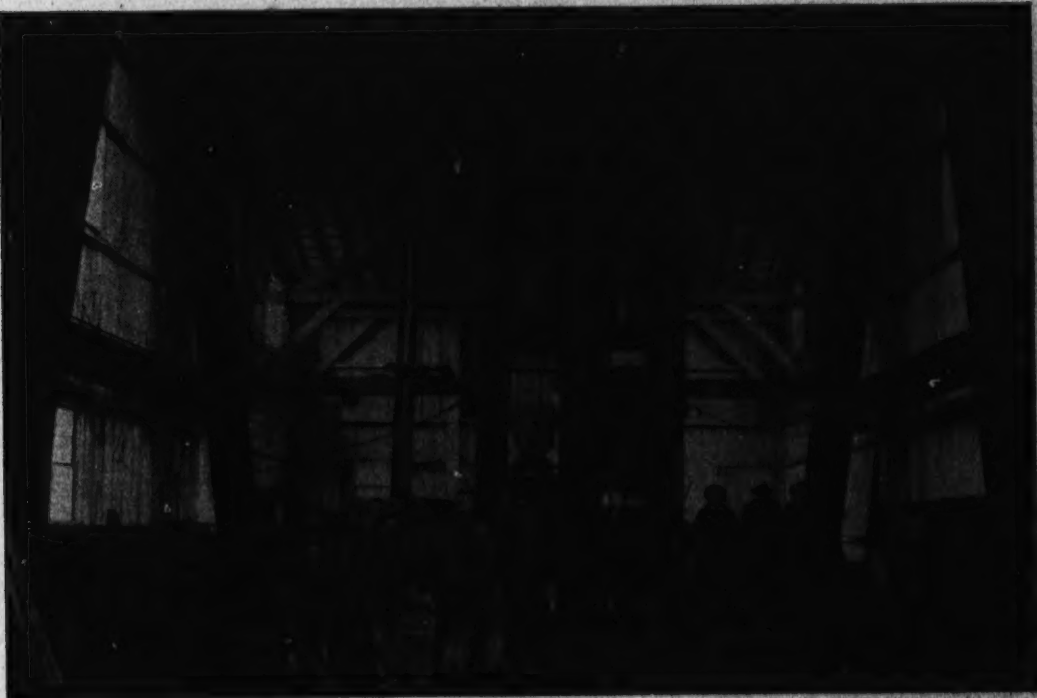
Not only in its material aspect has Butte developed. Recognizing the fact that educational facilities are essential to a city of homes, great attention has been given to the development of the public school system, which has become the pride of its citizens.

LIBRARY
OF THE
UNIVERSITY of ILLINOIS.

Butte possesses one of the finest street car systems in the west, and under the liberal methods followed by its owners the full benefits of rapid transit are enjoyed by the people of the city and suburban towns.

It has a perfect sewerage system, and at this time a water works system is being completed on a scale truly magnificent, the estimated cost being over a million dollars. Yet with all these public improvements, the rate of taxation in Silver Bow county is the lowest of any county in the state.

The stranger who comes to Butte finds himself in a wonderland where strange things never quit happening, where both accident and industry make men rich almost before they know it and where mad-cap luck tosses favors



INTERIOR OF SHAFT HOUSE, SHOWING FOUR-DECK CAGE—BUTTE.

about with a hand as prodigal as it is inconsiderate. He strikes a town whose people are as confident of its future as they are proud of its past; a country where in one shape or another, mineral manifestations are written in the rocks at the surface; a country where more wages are paid to miners by 200 per cent than are paid in Spain, Australia, Africa or Mexico, and yet where more profits are realized from the mines than in any other section of the globe.

No wonder the people of Butte wear a cheerful countenance. Their city, marching forward at a pace as steady as it is rapid, is established upon a substantial foundation and is prosperous because it has fairly earned prosperity.

On the future of Butte who shall speak? In it are bound up possibilities hard to grasp. It opens up a vision laden with a wealth of natural and arti-

ficial products, a golden harvest of the metals, a commercial trade with a vast area of country and a constantly increasing population of enterprising, industrious people who are content to make the future of Butte their own.

Butte is a live, enterprising city and its people are fully abreast of the times in all that an intelligent, wealthy and progressive people can achieve



A SAMPLE BUSINESS BUILDING OF BUTTE.

for public or personal welfare and comfort, and affords opportunities unexcelled, if equalled, on the continent for those who are competent or able to engage in mining or kindred enterprises.

Montana's prestige as the greatest mineral producing country on the globe is due to the wealth derived from the inexhaustible copper and silver mines of Butte. Its copper mines are the wonder of the world. During 20

years of development their production has increased to such an enormous extent that the Butte district now furnishes more than 25 per cent of the world's entire supply of copper. Should the copper mines of the Butte district shut down for three months there would be a copper famine in Europe and America and every industrial center on the globe would be affected thereby to an almost revolutionary extent.

Millions upon millions of dollars have been invested in the copper in-



BUCKET HOIST-BUTTE.

dustry in the Butte district; millions of dollars are paid out each year in wages to the men employed in the mines, while millions more go into the pockets of the eastern capitalists whose faith in the permanency of the copper deposits of Butte has never wavered. Mammoth hoisting plants, splendidly equipped with the latest improved and most costly machinery, dot the hillsides within a radius of two miles of the city, magnificent reduction plants, amazing in their immensity and supplied with everything that the genius of two continents could devise for the economical treatment of ore, are located within convenient distances from the mines, while every appliance that would

tend to lessen the cost of mineral production without diminishing the wages of the workers, can be found in successful operation here.

Copper will be the chief product of the Butte district for the next quarter of a century. That is the judgment of some of the greatest geologists and mining experts, founded on a thorough and very impartial examination of the ore deposits of the district, and of the men who have invested their millions



OWSLEY BLOCK-BUTTE.

in the mines. Twenty years ago the great Anaconda mine was an insignificant "prospect," while the other great producers of the present day were almost unknown. The mines of the Lake Superior district have been worked continuously for more than half a century and are yet great producers with every indication of their continuing so for the next half a century. There the mines are developed to a depth of over 5,000 feet. Here in Butte the deepest shafts have only reached a depth of 2,200 feet. It has been demonstrated at every copper mine in the district that the ore improves and is enriched

with depth. This has been shown at the Anaconda and Boston & Montana properties, where millions of tons of high grade ore have been blocked out during the past year. In not a single copper mine in the district is there the slightest indication to show that the bottom of the ore deposits has been reached.

Butte's Production in 1900.

The mining district of Butte has far outstripped all other mining districts in the world in the production of minerals during the closing year of the nine-



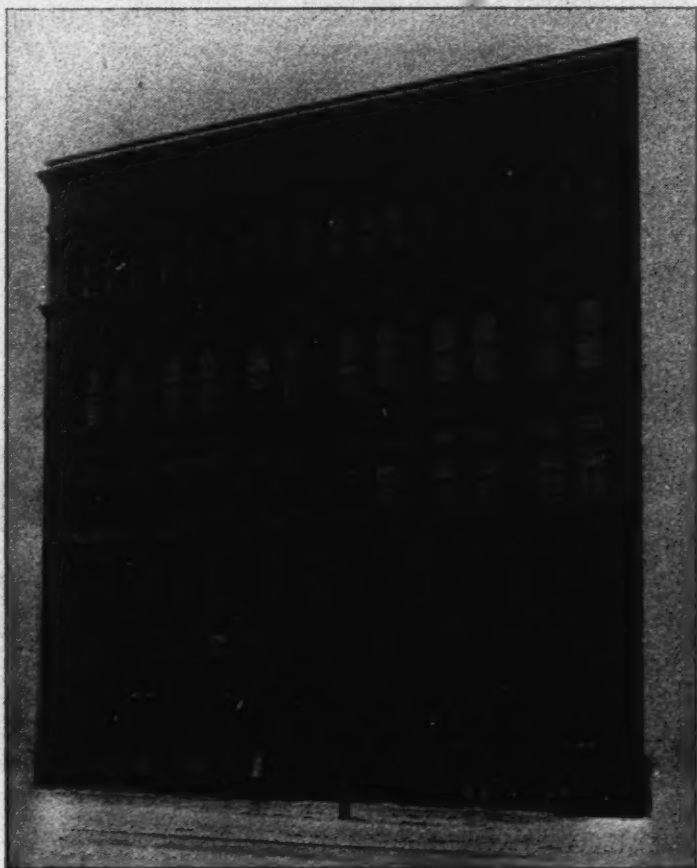
LEONARD SHAFT—BUTTE.

teenth century. People unacquainted with mining and the extent to which it is carried on in Butte, can scarcely conceive the enormous amount of money the mines of this district have added to the imperishable wealth of the world measured in dollars, the production reached in round numbers, the stupendous total of \$50,000,000.

The figures of the recent census give Butte and its environs about 46,000 people. This means that Butte's mines added to the world's wealth during the year considerably over \$1,000 for every man, woman and child in the community. This gratifying showing has been achieved without any special effort on the part of the mining companies. On the contrary several of the large producing mines have been closed down at times during the year for

various reasons, notably the Parrot, owing to the fire of last summer, and the Anaconda, owing to an accident to the machinery.

The Anaconda led in the matter of production. The product was about 112,000,000 pounds fine copper, nearly 4,000,000 ounces of silver and nearly 15,000 ounces of gold, the silver and gold being by-products of the copper. The total valuation of its production was \$20,928,208. During the year this company paid out about \$5,500,000 for labor.



SILVER BOW BLOCK-BUTTE.

The Boston & Montana was second as a producer. Its product was 75,000,000 pounds of fine copper, 1,312,500 ounces of silver and 4,811 ounces of gold. The total valuation of the product was \$12,896,845.

The Butte & Boston was next. Its production of fine copper was 24,000,000 pounds; silver, 936,000 ounces and gold 1,600 ounces. Total valuation of production, \$4,733,600. This company has only been operating its own smelting plant since February.

The Colorado Company produced 11,281,578 pounds of fine copper; 1,251,-

988 ounces of silver and 21,303 ounces of gold, the valuation of which is \$3,351,232.

The Colusa-Parrot produced approximately 12,000,000 pounds of copper, 750,000 ounces of silver and 2,500 ounces of gold, of a total value of \$2,427,500.

The value of the product of the Montana Ore Purchasing company for 1900 was \$2,150,000.

The Parrot Company's production during the year was 11,400,137 pounds of copper, which with the gold and silver values amount to \$1,613,352.

The Washoe Company's production was 4,263,727 pounds of copper, 280,579 ounces of silver and 641 ounces of gold. The total value of the production was \$887,333.

The production of the Speculator mine during the year 1900 amounted to about \$1,312,000.

To give the reader who is not familiar with mines and mining an idea of the immensity of some of the larger institutions, we quote the following reports that are made under the provisions of the law:

ANACONDA COMPANY.

Mines operated—Anaconda, Mountain Con., Green Mountain, Bell and Sampling Works.

Tons of ore extracted	1,421,500
Gross value, per ton	\$ 13.18
Cost of extraction, per ton	4.38
Total cost of extraction	6,228,656.25
Cost of transportation (27 miles), per ton	.21
Total cost of transportation	300,031.58
Cost of reduction, per ton	3.77
Total cost of reduction	5,354,145.79
Paid for labor	5,878,861.47
Paid for machinery and supplies	5,703,949.57
Freight	300,031.58
Marketing products	1,481,780.73
Net proceeds	5,905,518.15
Recapitulation:—	
Gross proceeds	18,730,121.50
Cost of mining	6,228,656.25
Freight on ore	300,031.58
Cost of reduction	5,354,145.79
Selling and marketing	1,481,780.73
Net proceeds	5,905,518.15

BUTTE & BOSTON COMPANY.

	Blue Jay.	Other mines
Tons of ore extracted	21,164	122,872
Cost of extraction, per ton	4.86	6.19
Gross yield per ton	\$ 14.61	\$ 14.61
Total cost of extraction	161,344.70	760,067.31
Cost of transportation, per ton	.23	.23%
Total cost of transportation	4,959.94	27,282.32
Cost of reduction, per ton	3.59	3.59
Total cost of reduction	111,059.77	439,331.98
Paid for labor	124,715.93	630,968.08
Machinery and supplies	127,030.43	567,069.37
Selling and marketing products	25,949.43	41,437.90
Net proceeds	150,481.84	439,831.46
Total for all mines:—		
Paid for reduction, per ton		3.59
Total for reduction		550,961.75
Paid for necessary labor		705,682.91
Paid for machinery and supplies		694,119.35
Selling and marketing products		177,287.33
Net proceeds		571,313.30
Total cost of production, per ton		6.33
Total cost of production		908,512.01
Transportation, per ton		.23%
Total for transportation		34,242.78
Net proceeds of Blue Jay		150,481.84
Net proceeds of other mines		439,831.46

SEVENTH ANNUAL REPORT OF BUREAU

COLUSA-PARROT COMPANY.

Burt, Woolman, Home, Original, Stewart, Dives, Colusa and Parrot.	
Tons of ore extracted	2,068
Gross yield per ton	\$ 8.93
Cost per ton for extracting	3.76
Total cost of extracting	778,900.00
Transportation per ton, (two miles)	.30 1/4
Total for transportation	62,113.00
Cost of reduction, per ton	3.29
Total cost of reduction	681,445.00
Paid for labor	481,284.00
Supplies	197,566.00
Net proceeds	326,044.00

COLORADO COMPANY (GAGNON MINE.)

Expenditures from June 1, 1899, to May 1, 1900	\$560,138.36
Receipts	667,562.24
Proceeds for 11 months	107,423.86
Add one month, average	9,766.80
Concentrator profits, one year	26,391.98
Net proceeds for 12 months	142,581.64

PARROT SILVER AND COPPER COMPANY.

Gross production	\$1,429,727.99
Cost production	629,072.53
Net proceeds	800,655.47

ALICE GROUP OF MINES.

Ore milled, tons	6,946
Yield, 132,124 ounces of silver, 57 cents per ounce	76,816.38
Yield of gold	8,114.63
Ore sold, 5,228 tons	107,541.32
Total	190,972.33
Expenses	206,544.66
Loss in operation	15,572.33

The Alice mine is a silver proposition almost exclusively, and is owned by Walker Brothers of Salt Lake.

LEXINGTON MINING COMPANY.

Tons of ore extracted	2,449
Value per ton	19.89
Cost per ton for extraction	11.18
Total cost of extraction	27,368.36
Cost of transportation (two miles)	.50
Total cost of transportation	2,449.00
Cost of reduction, per ton	7.44
Total cost of reduction	18,221.00
Paid for labor	23,215.00
Paid for supplies	3,364.00
Improvements	888.54
Net proceeds	667.21

SNOHOMISH AND TRAMWAY.

Gross yield from August 1, 1898, to June	79,900
Number of tons	25,400
Net Proceeds	\$79,900

SPECULATOR (J. A. CREIGHTON AND LARGEY ESTATE.)

Tons of ore extracted	9,543
Net proceeds	\$92,155.38

MONTANA ORE PURCHASING COMPANY.

Net proceeds	\$400,000
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BOSTON & MONTANA COMPANY.

Net proceeds	\$6,073,153.34
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Extension of the Copper Belt.

The developments of the past year in the mines of the Butte district tend to confirm the long-cherished belief of the best posted mining men of the country, viz: that within a short period the copper zone of the district will be very materially extended, and that instead of the present limited area the copper belt will include all that country between Butte and the main

divide of the continental range on the east and the flats on the south of the city. The Smokehouse shaft is now being developed in the heart of the city for the purpose of determining whether the big ledges of Anaconda hill run through the southern portion of the city as many mining men believe. This shaft is making splendid progress and it is expected that by May of next year the lead will be cut exposing a big body of copper ore.

East of the city, in the Park canyon district, considerable capital has been invested by well known operators in Butte mines, in the development of that district and results have been so satisfactory that it is confidently believed that within another year regular shipments of copper ore will be made from



PARROT AND CLARK'S COLUSA MINES- BUTTE.

this locality. The development work is largely confined to the Homestake mine, but eastern capitalists have invested considerable money within the last year in adjoining properties upon which it is expected work will be commenced early next year.

In the southern portion of the city within recent years new and rich ore bodies have been opened up. On the flat directly south of the city splendid copper indications have been discovered and the belief is generally held that a deep shaft is all that is necessary to open up another copper bearing area. North of the city the copper belt has been extended within the past year to the Gem and other mines hitherto considered beyond the copper bearing area.

Butte's Payrolls.

Butte disburses more money to the men and women employed in its various industrial interests than any town of twice its size in the country chiefly because labor here receives the highest rate of wages in the United States. The various mining companies pay out each month more than a million dollars in wages to the men employed at the mines. Add to this the amount paid by the smelters and the various mercantile and manufacturing houses of Butte and the total is not far from \$2,000,000 per month.

The following table is compiled from the report for 1900 of the State Mine Inspector. It shows the number of men employed during the present year in the mines of the Butte district:

Number of Men Employed.

Anaconda Mines	3,981	Washoe Company	183
Boston & Montana	1,389	Speculator	143
Butte & Boston	629	Minnie Healey	88
Montana Ore Purchasing Co	618	Alice	79
W. A. Clark's Mines	533	Other Mines	500
Colorado Company	316		
Parrot Company	288	Total	8,679

Depth of the Principal Mines of Butte.

Diamond	2,200	Bell	1,050
Green Mountain	2,200	Parrot	1,000
High Ore	2,200	St. Lawrence	1,000
Mountain Con	2,000	East Gray Rock	1,000
Never Sweat	2,000	Colusa-Parrot	1,400
Anaconda	1,800	Pennsylvania	1,400
Gagnon	1,800	Speculator	1,200
Mountain View	1,700		

Dividends Paid by Butte Companies During 1900.

Boston & Montana	\$6,450,000
Anaconda	4,900,000
Parrot	1,375,000
Butte & Boston	1,000,000
Montana Ore Purchasing Co	180,000
Total	\$13,725,000

The site of Butte is on the gently sloping side of a mountain, on the north of a beautiful valley and commanding a magnificent view of one of the most fertile regions of the state. The city has an elevation of 5,758 feet above tide water. Two miles to the east is the main range of the Rockies; on the west the huge, isolated butte or hill from which the city takes its name.

The climate is remarkably healthy, the winters preserving a golden mean between the bitter cold weather of the north and the enervating climate of the south. The death rate is the lowest of any city in the Union. It is an ideal climate for those suffering from lung troubles.

Butte has a delightful society, capable of satisfying everybody's taste. If you wish to meet with refined and cultivated people, college-bred and broadened by travel, they are here and happy to know you. If you like plain, common, everyday folk, whose hearts are perhaps better than their manners, they are numerous and sure to be friendly.

The importance of public schools escape no western community and in Butte the people have been liberal and public spirited to a degree unusual even in western states. Fully 95 per cent of the children of Butte of school age are in actual attendance on the public schools. Butte has 14 school build-

ings (not counting the annexes) with 14 principals in charge and 165 teachers of all grades. A fair estimate of the attendance of pupils, in round numbers, would be 6,500. The buildings are of brick and stone and will compare favorably with those of the most cultured communities in the eastern states. The High school building is one of the best structures in the west, costing up-



SILVER BOW COURT HOUSE-BUTTE.

wards of \$100,000. The total cost of all the school buildings in Butte was upwards of half a million dollars. The total expenditures for the present year were more than \$200,000, the monthly pay-roll of the teachers being about \$15,000. The schools of Butte have a splendid reputation for efficiency all over the west and the facilities for imparting information to the youth of the city cannot be surpassed anywhere. Especial care is taken in the selection of the corps of teachers each year, none but the brightest being retained.

There are also two parochial schools which are well attended, a business college, a conservatory of music and numerous private schools and academies.

Butte has 12 handsome churches which are the pride and glory of its

people. Every denomination is represented and the clergymen of Butte are noted for their culture and eloquence. They are progressive gentlemen, liberal in their views and thoroughly devoted to the noble work of uplifting the morals of the city.

Butte has one of the best equipped libraries in the whole northwest. The building cost \$100,000 and contains 30,000 volumes. It is well patronized, the November (1900) issue of books for home and library use being over 13,000. It is supported by a city tax of one mill on the dollar.

The city has long since attained the proportions of a metropolis. Splendid steel, brick and stone structures have been erected. The Hennessy build-



GREEN MOUNTAIN MINE-BUTTE.

ing cost \$250,000. Among the other buildings are the court house which cost about \$200,000, numerous school houses costing \$75,000 each, two opera houses one costing \$50,000 and the other \$35,000, and another costing \$100,000 in contemplation, two first-class hotels, costing \$60,000 and \$45,000, respectively, and one almost completed at a cost of \$125,000. There are various other blocks in the city costing from between \$30,000 and \$75,000. The size and permanent appearance of the structures are indicative of the wealth and prosperity of the city. Many of the residence buildings are the finest in the west. The city is rapidly extending in all directions. During the first eleven months of 1900 the cost of the buildings erected in Butte aggregated \$1,000,000.

Butte is supplied with all the modern conveniences of a metropolis. It has two splendid electric light plants, a telephone system connecting with all point in the west, two lines of telegraph, a street railway system to all the suburbs, excellent police protection and within the next month will have the finest water works system in the west.

Three daily newspapers are published in Butte, each of which receives the Associated Press report. They are the Standard and Miner, both morning papers and the Inter Mountain an afternoon paper. There are also six weekly newspapers published in Butte and all receive a fair share of patronage.

Butte is one of the strongest labor union towns in the country. It has



PENNSYLVANIA MINE—BUTTE.

some of the strongest labor organizations in the west, and every craft is organized. The unions of Butte, however, have conducted their affairs so conservatively, that there has never been a labor strike in the town. Capital and labor have ever been on the most friendly terms in Butte. Many of the largest mine operators of the district at some time in their lives toiled in the mines. The unions command the respect and receive the support of the people and as a result of their organized efforts the rate of wages is good and the standard of living is high.

Butte has an energetic and earnest corps of health officers, and the sanitary conditions of the town are closely attended to.

The banking houses of Butte are as solid as a rock, and few banks in any city transact as much business as the five banks of Butte. Their stability was tested during the panic of 1893, at a time when banking houses in all parts of the country were being dashed to pieces. Not a bank in Butte succumbed.

The five banks in Butte are the First National, Silver Bow National, State Savings, Clark & Bro., and Daly, Donahoe & Moyer. In addition to

these James A. Murray has a private bank. The total deposits, subject to check or certificate, amount to about \$12,000,000, which for a town the size of Butte is a splendid showing. The State Savings bank has deposits amounting to nearly three and a half million dollars. The First National bank has individual deposits amounting to a million and a half, and demand certificates of about \$750,000. The Silver Bow National has over half a million on deposit. The banking house of W. A. Clark & Bro. makes no public statement but in view of the fact that Mr. Clark is a large employer of labor it is reasonable to infer that the deposits there are as large as in the other banks. The



ALICE MINE-BUTTE.

deposits at the bank of Daly, Donohoe & Moyer amount to about \$3,500,000. Nearly all of these deposits belong to the men who toil for a living.

Four lines of railroads enter Butte and ten of the great railroads of the country maintain their representatives and offices in the city. All are doing a splendid business. Butte is one of the greatest railroad towns in the west, the business done being phenomenally large. It is estimated that over half a million tons of freight was handled in Butte during the past year. This includes the great quantities of timber used in the mines. In some of the big mines of the camp over 150,000 feet of timber are required each day, the aggregate reaching into the billions of feet each year. The internal transportation is splendidly handled by the Street Railway company, which also operates an ore line, hauling the ore from several of the mines to the smelters. The ore handled by the railroads of Butte in a year amounts to thousands of tons.

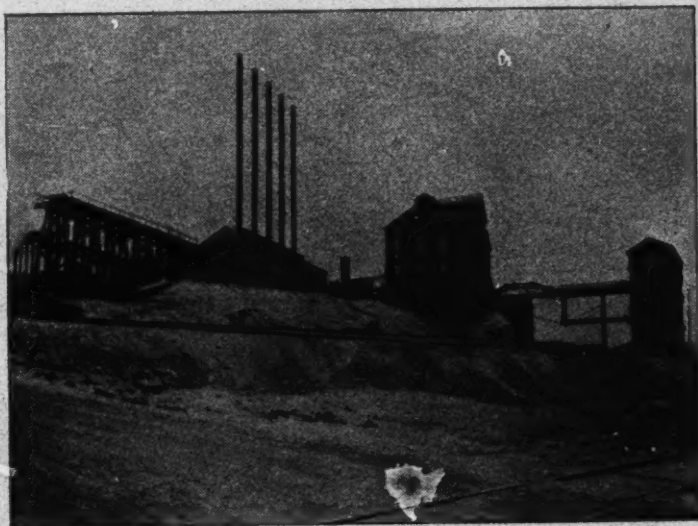
The railroads operating lines in Butte have shown a very liberal policy in their dealings with the people and the people have reciprocated in kind. During the year the railroads have expended several thousand dollars in improvements.

There are six well-equipped hospitals in Butte to care for the sick. Several of the hospitals are supported by the miners, who pay a dollar each month.

All the leading fraternal, benevolent, charitable and religious organizations are well represented in Butte. Among the most prominent may be mentioned the Masonic, Knights of Pythias, Odd Fellows, Druids, A. O. U. W., Elks, Good Templars, Red Men, Maccabees, Sons of St. George, Junior Order, Sons of Hermann and Order of Pendo.

There are several women's clubs and Chautauqua literary and scientific circles.

The population of Butte as given by the last census was 47,635. Evidence



NEVER SWEAT MINE—BUTTE.

has accumulated since the census was taken to show that a great proportion of the population was overlooked. Butte has a population of at least 60,000. In 1890 the town had an estimated population of 30,000. Twenty years ago it had a population of 5,000. Thirty years ago it had a population of 350.

Some Facts About Butte.

Silver Bow county has the lowest rate of taxation in the state.

Silver Bow county has the highest assessed valuation in the state, \$36,264,637.

The value of personal property in the county exceeds that of real estate, personal property being valued at \$19,582,140 and real property at \$16,005,890.

In the past ten years Butte copper mines have paid in dividends \$43,295,323.

During the past ten years the Boston & Montana Copper Company has

paid in dividends \$20,975,000, and during the past year this company has paid \$6,450,000 in dividends.

Since 1896 the Anaconda Copper Company has paid in dividends \$16,950,000. During the year 1900 this company paid in dividends \$4,800,000.

The Parrot mine has paid in dividends to date \$4,370.00 and during 1900 paid \$1,335,000.

Butte & Boston paid one dividend of \$1,000,000 during 1900.

The first railroad entered Butte just 19 years ago.

Between 1870 and 1885 the yield from Butte's placer and quartz mines aggregated \$39,606,000.

Butte's mineral output for 1900 will amount to \$49,176,070.



WEST COLUSA, BUTTE & BOSTON - BUTTE.

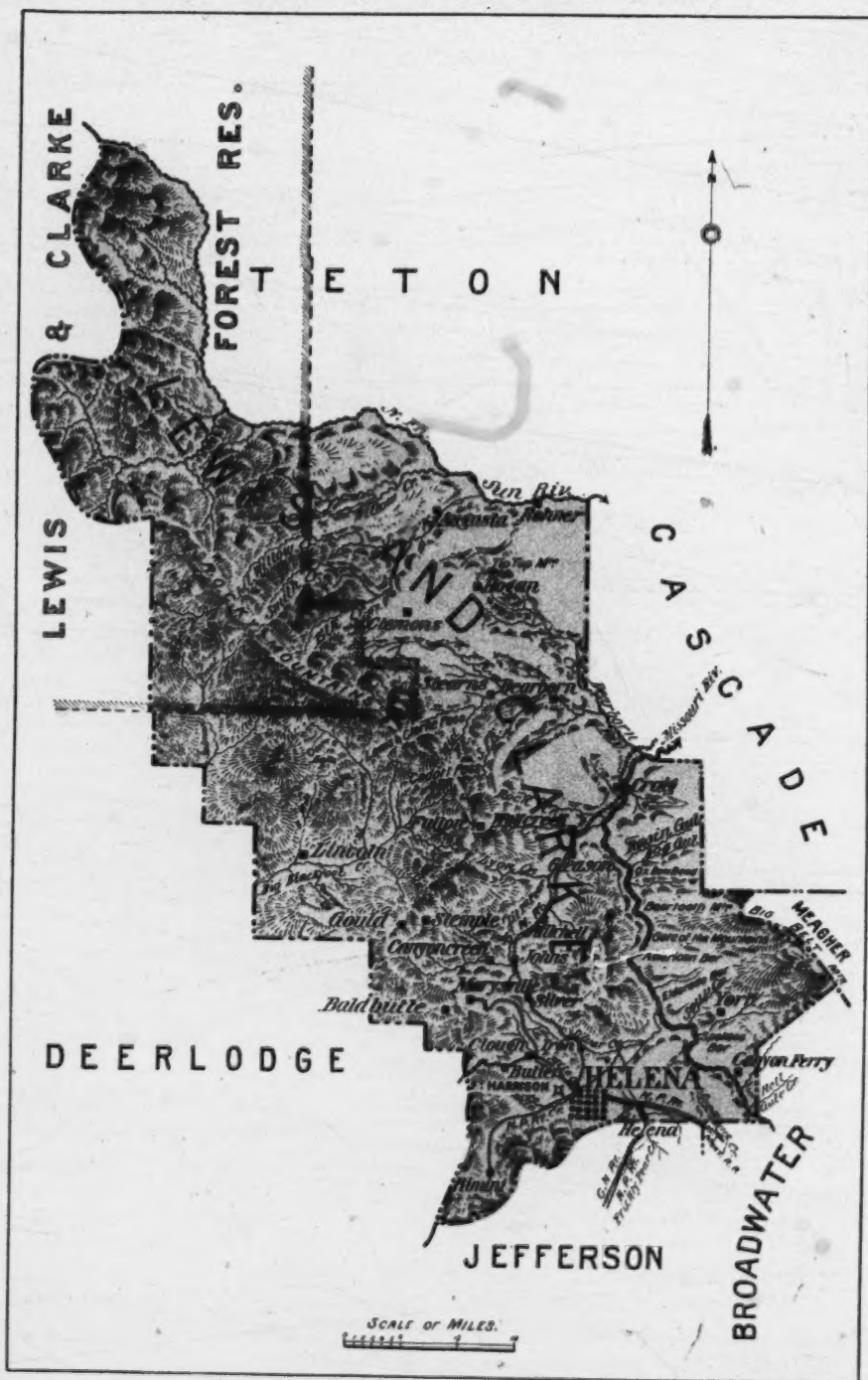
Figuring the gold and silver at their coinage value and the copper at an average price of twelve cents per pound, the total output of the three metals from the quartz mines of Butte since 1882 will amount to \$589,217,502.

Butte is the wholesale center of the state.

Paving.

During the past four years Butte has expended \$215,000 in the paving of its streets. Ten full blocks were paved last season. The principal business streets of the city are now paved, and it is very likely that during the coming year considerable of the residence portion of the city will also be paved. The paving is of the most substantial character, being of granite blocks upon a concrete foundation. It is likely that the residence portion of the city will be paved with a combination of asphalt and macadam.

LIBRARY
OF THE
UNIVERSITY of ILLINOIS.



Assessed Valuations.

Real, \$10,751,286; personal, \$3,797,149; railroads, \$703,393; total, \$15,251,828.

Lewis and Clarke County and Helena. ♡ ♡ ♡ ♡

**Mining of Gold, Silver, Lead and Copper, Agriculture and Stock Raising
Produce Great Wealth Each Year—Helena the Capital and Banking
Center of the State.**

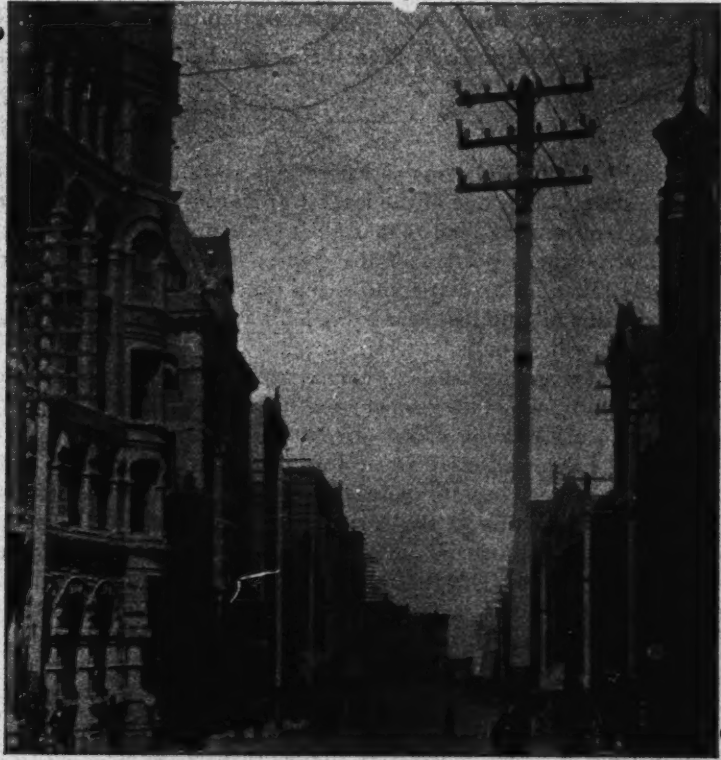
Lewis and Clarke county has as varied and as valuable resources as any county in the state. It is one of the largest producers of gold and silver, and has a large area of farming land that is already occupied by a thrifty class of farmers. The northern portion of the county where irrigation is not possible, is largely taken up by cattle and sheep ranches.

The production of gold last year exceeded a million and a half dollars and the present year will show a material increase over last. This production makes it the banner gold producing county of the state; indeed, if the gold produced as a byproduct of the copper ores of Butte is omitted from the computation, Lewis and Clarke produces almost one-half of the entire gold output of the state. The application of modern methods of concentration and treatment by cyanide is very rapidly increasing the gold production of this county. While the production of this county is large, it is but a tithe of what may be expected when thousands of promising surface prospects are developed. The most development in the mines has been made at Marysville and in the Red Mountain country, in the vicinity of Rimini; and on the Belt mountains at York, and these districts are really but scratched on the surface. During the last ten years since the depression in the price of silver, the attention of mining men and prospectors from all over the state have been directed to the gold deposits of this county, and the result of this systematic search is plainly shown in the rapid increase of production and the location of a large number of new claims. The presence of a large mining population of course furnishes a large and increasing local market for all of the products of the soil. The supply of agricultural products by no means equals the demand of the local market, and that at a price which would make the eastern farmer green with envy.

The short distance to the local markets at the mining camps and Helena, permit the farmer in most instances to haul his own produce by wagon to market, with a consequent saving in freight and commission charges, which amount to a very substantial yearly profit.

Lewis and Clarke county is remarkably well watered, lying as it does, in a long strip along the eastern slope of the Rocky mountains; numerous

streams that are fed by the snow in these mountains cross the country nearly at right angles and run into the Missouri river, other streams having their head waters in the Belt mountains flow to the west into the Missouri river. The most notable streams in Lewis and Clarke county are the Missouri river, the Little and Big Prickly Pear, Wolf Creek, Dearborn, North South and Middle Fork, Sun river, and the Big Blackfoot, with its two branches. These streams furnish ample water at all seasons of the year for irrigation purposes, and running with rapid fall to the rivers, but short and inexpensive canals are necessary to utilize their waters.



MAIN STREET—HELENA.

Lewis and Clarke county is most advantageously situated with reference to the rest of the state and the conformation of the mountains and streams is such, that all lines of railroad seeking an entrance to the mines or on their route to the Pacific necessarily pass through this county and furnish convenient and easy communication with the rest of the world. It was no mere accident that the successive expeditions that explored the northwest long before the days of the railroad passed through this country on their route to the coast. The direction of the streams and trend of the mountain ranges make this county the highway from the east to the west and

from the north to the south. The railroads passing through the county followed the routes of the explorers.

This county is centrally located between the mineral country of the south and west and the agricultural country of the north and east, making it a convenient meeting point for the farmers, cattle and sheep raisers, and the miners. Long before the days of the railroad the city of Helena was the distributing center for the placer camps of the state, and now that the railroads have come, it is still the distributing center. Helena has been



BROADWATER HOTEL--HELENA.

the capital of the state for many years, and has gradually collected from all over the state a class of inhabitants who, coming here either as state officers, or having business connected with the state, have become attached to the city, and have made it their permanent home, forming a class of residents who are especially desirable from an intellectual and social standpoint.

The population of Helena is 10,772. This does not include a suburban population of several thousand. The town is remarkably well built, and for its size, can boast of as handsome business buildings and as attractive and well appointed residences, and all the urban facilities, such as gas, electric lights, street cars, theaters, as well as business establishments in all lines of trade as in cities of the Mississippi of 100,000 people.

The rapid growth of the silver-lead smelter at Helena and its continued enlargement under each successive management, is proof that Helena is an

especially favorable location for this business. It is located in the center of the most prolific dry ore producing district of the northwest, and by means of the Northern Pacific railroad has close connection with the Coeur D'Alenes in Idaho, the largest wet ore producing district in the northwest. The fuel supply that is available from both railroads, over the Great Northern from the north and Northern Pacific from the east, makes fuel for the smelters



BROADWAY-HELENA.

abundant, easy to obtain and cheap. The recent development of the electric power at the Missouri river, which has cost up to date over a million dollars, makes available 20,000 horse power which is used to generate electric power, and is transmitted by cable to the smelters and the city, furnishing motive power at as low cost as anywhere in the United States. This combination of natural smelting and refining advantages will certainly attract other plants. While the lands of this county are fairly well occupied, there are numerous opportunities for additional settlers on the public and railroad lands of the county. The present farmers are prosperous, but in most instances have too large an area to farm to the best advantage. Eastern farmers who are accustomed to smaller areas of land can purchase from the present owners and make handsome profits with the more intense methods of farming. The

local demand in Helena and at mining camps will always consume at high price more than the lands of the county can possibly produce.

The system of schools in Helena, both public and private, is not surpassed anywhere in the country.

A description of Lewis and Clarke county would be incomplete without a chapter devoted to its county seat and chief city. The capital of Montana is a gradual growth composed of the best elements from all over the state. It is an evolution from the Mining camp which was started in Last Chance gulch by the discovery of gold in 1884, and after these placers were exhausted, it grew because of its central location at the meeting of the trade routes that



MOUNT HELENA IN THE BACKGROUND.

traverse Montana from the north to the south and from the east to the west. It is the oldest city in the state, and during the thirty-six years of its existence it has naturally attracted to it a large portion of the most substantial people in the state, who have come for the purpose of educating their children, and for the social and other advantages obtainable at centrally located cities. Helena is universally conceded by all who visit it that it is the best built and most metropolitan of any place of its size, or of many times its size west of the Mississippi river. It is in every sense of the word a city, and possesses all of those urban facilities usually found in the large eastern cities. The location is of the most picturesque, and is protected by the mountains from the winds of every compass point. Its location on the slope of the mountain and on the edge of the beautiful valley is from a scenic and hygienic standpoint everything that could be desired. Its irregularity of contour and consequent avoidance of the straight lines so common in American cities makes it the more picturesque and attractive.

The officers of the United States army, in pursuance of the policy to con-

centrate troops at central points from which detachments can be most quickly and most easily moved to any given point, have built a central regimental post at Helena. Having a thorough knowledge of the country, and not moved by any sentimental notions, the selection of Helena for a post of this sort may fairly be accepted as a stamp of approval by the highest military authority that this is the natural distributing point of the state.

A circle drawn upon the map with Helena in the center and a radius of seventy-five miles will include within its limits a section of country that has produced one thousand millions in the precious and semi-precious metals within a third of a century. The minerals that go to make up this vast sum



POWER BLOCK-HELENA.

have heretofore been precious metals, but in addition almost every valuable mineral known is found within this circle. The production noted is increasing at the rate of from ten to fifteen million a year. The branch and main line of railways from every portion of this mineral field have down grade hauls to the city, making it possible to smelt ores from the surrounding mines with the greatest advantage. Helena is in the center of the dry ore field, at the most convenient point accessible to the Coeur D'Alenes in Idaho, the largest and best supply of lead ore in the United States. Fuel for smelting is delivered at Helena at as low a cost as at any other point in the northwest. The best evidence of the importance of the place as a smelting center is found in the plant at East Helena, which was started ten years ago with a capacity of one hundred and fifty tons, making it one of the largest and most complete plants in the state. All the lead smelters in the United

States, including the one at East Helena, are owned by the American Smelting & Refining Co. The plant at East Helena was the one selected by this concern for doubling its capacity, which was done during the past year. Owning plants located all over the United States, the fact that they should have selected this one for such material enlargement in preference to any other of their plants is conclusive proof of the many advantages for mineral reduction that are obtainable here. The construction of the Missouri river dam is further evidence of the opinion of smelting men as to the advantages Helena offers as a smelting point.



A GOLD MILL.

Next to the big electrical plant at Niagara, the one now installed on the Missouri river at Helena will, when the new additions to it now under construction are completed, be the most complete and extensive plant for the long distance transmission of electricity in operation in the country. No expense has been spared by the owners of this plant to have it complete and economical in every detail. The capacity of the present dam is already taxed, and another one is in contemplation. Numerous sites exist in the canyon of the Missouri river near where other dams can be built and the supply of power from the swift-flowing river made practically unlimited.

Intending manufacturers seeking a location in the state will find it to their interest to examine the openings presented in Helena. Many forms of manufacturing are already represented, all of them having started in a modest way, and are growing to importance. There are two large breweries

that ship their goods all over the state, a large concern making common and ornamental brick, fire brick, sewer pipe, drain tile, etc., that employs one hundred and twenty-five men. These goods are shipped all over Montana and the adjoining states. A large cracker and candy factory and several smaller establishments make candy. Several planing mills, sash, door and blind factories, large foundry and machine shops, a soap and candle factory. In addition to these there are numerous small manufacturing industries that

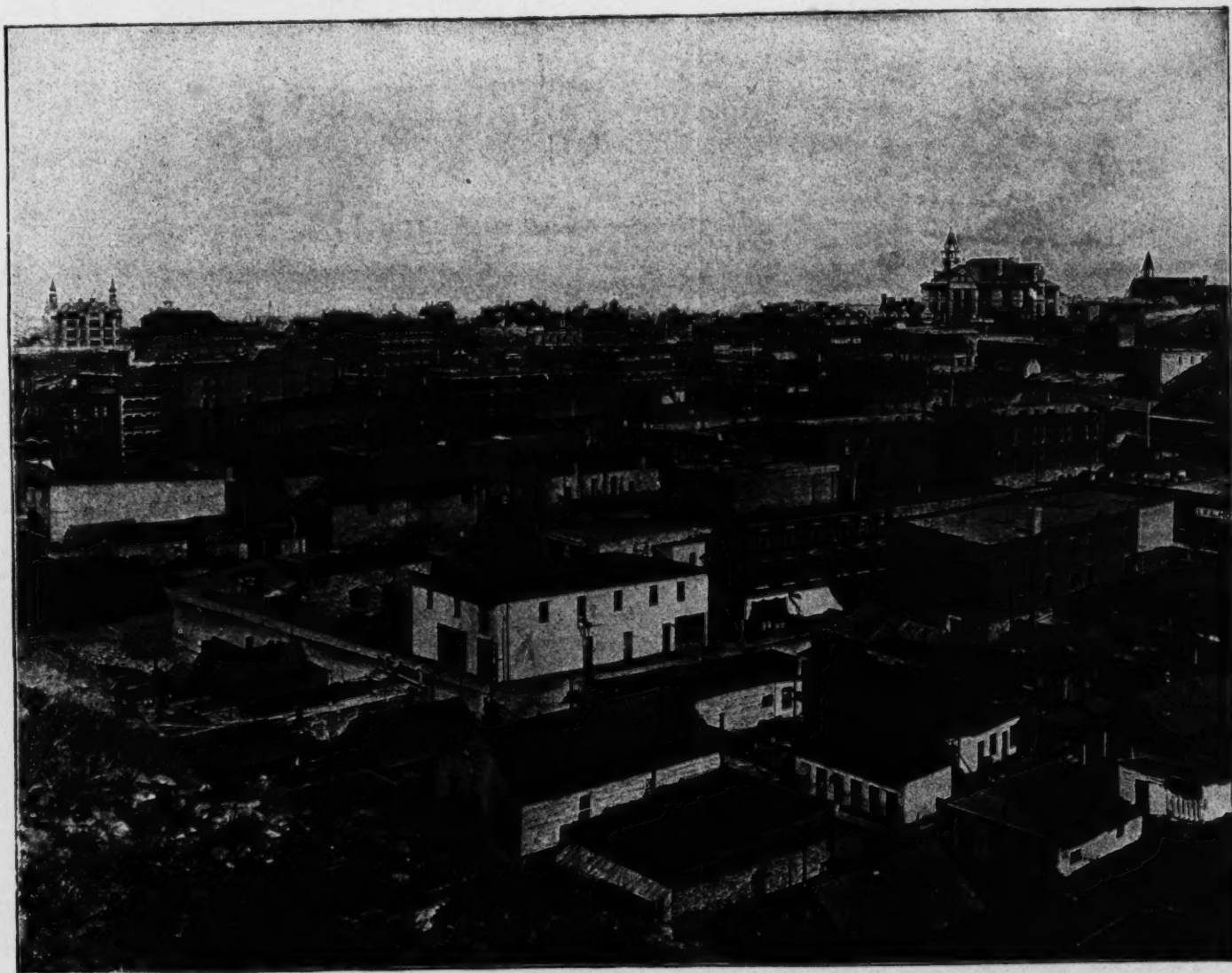


A HELENA BUSINESS BUILDING.

in the aggregate employ a large number of people. These smaller industries are growing rapidly, and others are being added; several during the past year.

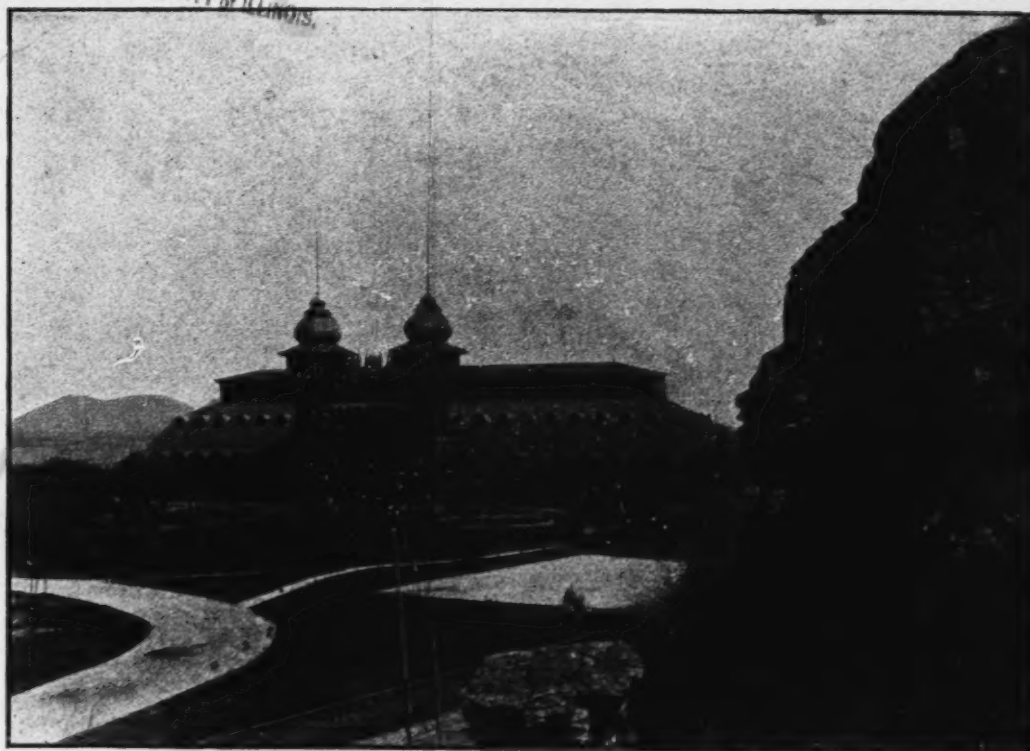
The system of schools, both private and public in Helena, are said by educational experts to be equal, if not superior, to those of any place in the west. No expense or pains are spared by the public spirited men who compose the school board to advance the standard and character of the schools.

The business buildings of the city are not surpassed at any place in the west, and the concerns that occupy them are certainly equal to those in eastern cities of many times its population. The same is true of the hotels, of which there are all grades.

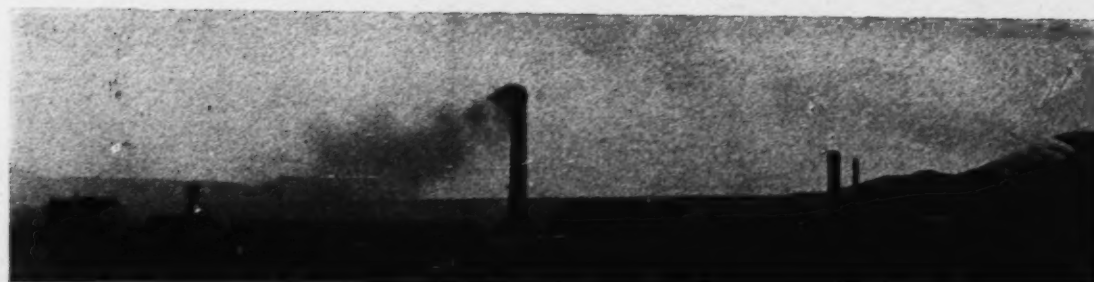


BIRDSEYE VIEW OF HELENA.

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BROADWATER NATATORIUM-HELENA.



EAST HELENA SMELTER.

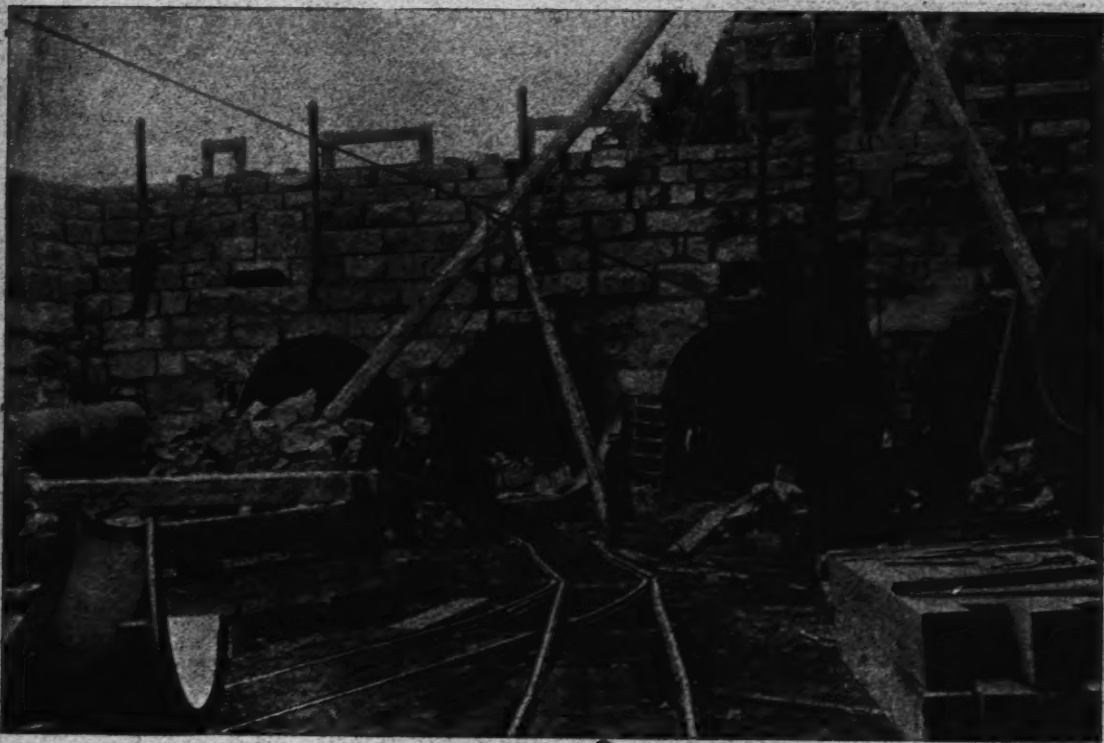
The big plunge bath at the Broadwater hot springs is three hundred and fifty feet in length and one hundred and fifty feet in width. It is one of the largest and best appointed bathing pools in this country. It is supplied with natural hot water, delivered at a temperature of one hundred and seventy degrees, and with the necessary cold water to temper it. The hotel in connection with it is also magnificently appointed, and the grounds sur-



INTERIOR VIEW BROADWATER NATATORIUM—HELENA.

rounding both buildings are everything that could be desired. This resort is located two and a half miles west of the city, with two electric street car lines affording rapid and easy communication. Another hot spring and most attractive resort is at Alhambra, twelve miles south of the city, where there is a picturesque and comfortable hotel, with plunge and private bath. This resort is of easy access by the daily trains of the Northern Pacific and Great Northern railways. These resorts are destined in time to attract many health seekers who wish to take advantage of the bright sunshine, the perfect climate of Montana, and the medicinal properties of the thermal waters.

Without attempting to describe at length the residences of the city, it is sufficient to say that in keeping with the business buildings, the residences are largely of brick and stone. Many of them would be a credit to the aristocratic avenues of any of the eastern cities. It is universally conceded that in this respect Helena has more attractions than any other city between St. Paul and Portland.



PENSTOCKS OF THE HELENA DAM.

The whole world is engaged in a mad scramble for gold, and those regions able to make a showing in the production of gold are most interesting to investors. Lewis and Clarke county is emphatically a gold producing region, and since the discovery of gold here in 1863, the total production has been over sixty millions of dollars. The increase in gold production from the quartz mines since the panic of 1893 has been steady and rapid, and the production for 1900 will exceed \$1,800,000. This is more than half of the entire gold output of the state, outside of Butte, where about a million and a quarter of gold is saved as a by-product of copper ores. This makes Lewis and Clarke the banner gold-producing county of Montana and the northwest. The production of this county exceeded the production of either Washington, Idaho or Oregon. The gold-bearing belt in Lewis and Clarke county extends from its southeastern corner to the south of the city of Helena, and thence in a wide semi-circle through Marysville, Bald Butte, to the northwest corner

of the county. This belt, or mother lode, it might be called, is several miles in width, and everywhere that systematic development has been undertaken mines of value have resulted. The deepest development is about the mining camp of Marysville, located eighteen miles northwest of Helena, on a spur of the main range. The principal mine in Marysville is the Drum Lumnon, which was purchased a number of years ago from its discoverer, Thomas Cruse, by the Montana Mining company, limited, an English corporation. This mine has been producing steadily for nearly twenty years, and during that time it has produced upwards of nineteen million dollars. The equipment consists of two well appointed stamp mills, one of sixty and the other



PROPOSED FEDERAL BUILDING—HELENA.

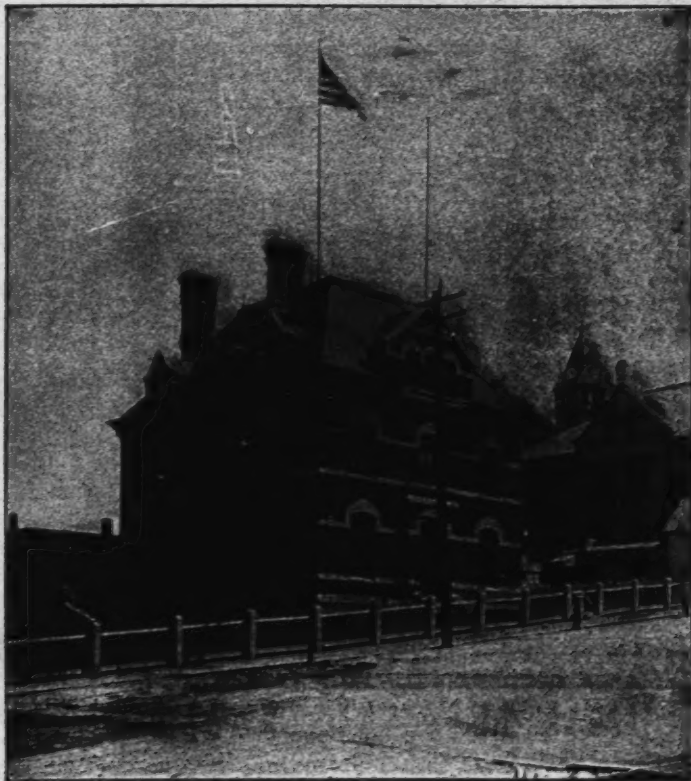
of fifty stamps. This mine has been the mainstay of Marysville camp, and supports a town of about 1,500 people, equipped with electric lights, water, etc. About three years ago this company built a large cyanide plant with a narrow gauge railroad five miles in length, for the purpose of treating the tailings from their quartz mills which had been accumulated in dams along Silver creek. This plant has a daily capacity of 400 tons. It has been in continuous operation, and the company is making a very handsome profit from the treatment of the waste of previous millings.

About three years ago Col. Thomas Cruse, of Helena, commenced to develop what is known as the Cruse and Bald Mountain Mining Claims, adjoining the Montana Mining company's properties. He built a twenty-stamp mill, with cyanide attachment, and it is now one of the big producers in Marysville.

A short distance from Marysville is the Belmont mine, for a number of

years a big producer, and then was closed down and lay idle until two years ago, when it was put in operation by the Penobscot Mining company. They reopened the Belmont, equipping the mill with cyanide to treat the tailings after the free gold has been extracted, and the result of this modern process is another big gold producer. The other mines in the vicinity of Marysville that are producers are the St. Louis Mining company, the Big Ox Mining company, the Empire, the Gloster, the Bell Boy, the Pegan and the Jerusha.

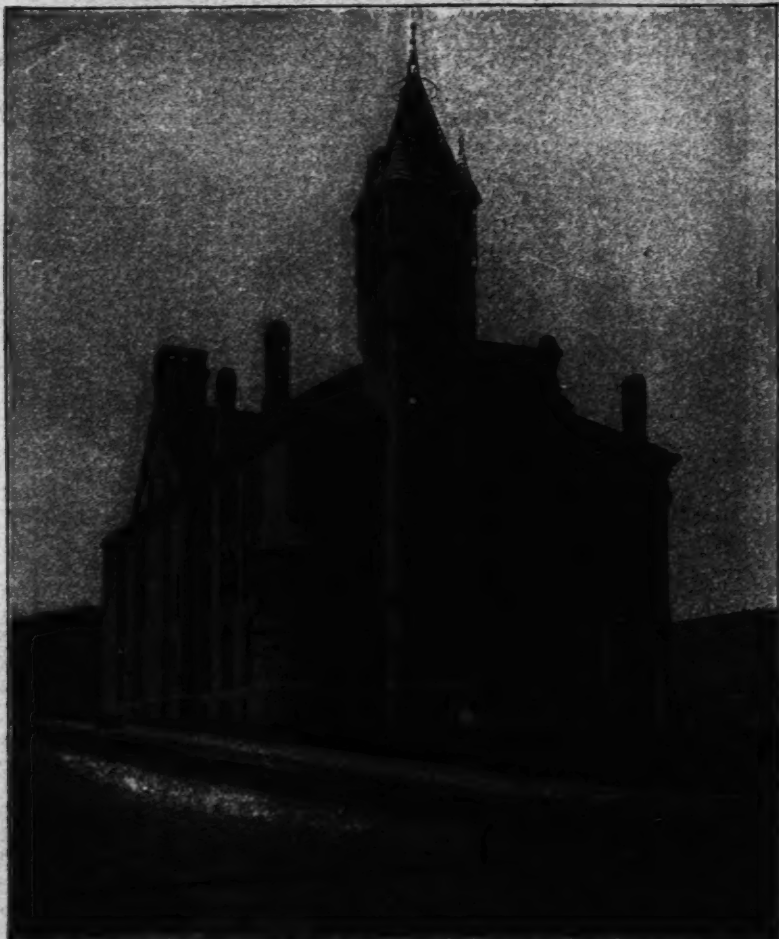
About twenty miles to the northwest of Marysville is the Bald Butte mine. This is the biggest producer today in Lewis and Clarke county, it



GOVERNMENT ASSAY OFFICES—HELENA.

having paid during the year 3 per cent, and for the last four months of the year 6 per cent a month in dividends. A rich strike of a parallel vein was recently made in this mine, the assays of the ore running as high as \$7,500 per ton, while the average value ascertained by mill runs was about \$100 per ton. This mine is equipped with a forty-stamp mill, and every labor-saving and modern device in gold saving. The dividend record of the Bald Butte, which has been a continuous one for about ten years, is now upwards of a million dollars. A short distance from the Bald Butte are a number of mining claims that are being developed, and from time to time shipments are made.

There are to the north and northwest of Marysville thousands of undeveloped prospects that are being developed by their owners, and many of these will eventually become paying mines. To the northeast of Bald Butte is located the Stemple gold district, and the Jay Gould is further to the north. The Jay Gould mine has produced a million and a half dollars. To the northwest and on the western slope of the main range of the Rockies



COUNTY COURT HOUSE—HELENA.

there are a number of good surface showings of gold ore, and in the extreme western portion of Lewis and Clarke county there is a copper camp that has a very promising future. High grade ore is being shipped to the railroad, but the distance and expense of the long wagon haul prevents extensive shipments for the present. When the mines are developed sufficiently to warrant the extension of one of the railroads into that section, the camp will become a prominent producer.

Southwest of Helena is what is known as the Red Mountain district. This district is located at the head of Ten Mile creek, and is connected by twenty miles of railroad from Helena to Rimini. The ore is uniformly a base combination gold, silver, copper and lead. At times veins of very high grade ore that will bear the expense of shipment are found, but the



LOOKING UP NEW YORK GULCH.

larger proportion of the ores in the district are of low grade, requiring concentration before shipment. Since the commercial concentrator was built at East Helena, affording an opportunity to treat the ore with profit, the district has experienced an energetic and warranted revival.

Beyond Rimini and on the summit of the main range at the head of Ten Mile creek, laying along the main divide of the Rockies, is one of the largest deposits of free milling gold in the United States. This is called the Porphyry Dike. It is a mile wide and three-fourths of a mile in length. Seventy

thousand tons of this ore have been milled in small and poorly equipped stamp mills, and an average saving effected of \$2.60 per ton net. One of the largest mines in the country makes a very large profit out of ore that only averages \$2.06 per ton. The ownership of the Porphry Dike has during the last year been consolidated into the hands of three mining men of ripe experience and very large capital. They have purchased the properties with the view of erecting mills of large capacity, and it is probable that the plant will be located in the valley below Helena.

To the south of Helena and to the east extending over into Jefferson county is another part of this gold district in which many discoveries of very high grade ore have been made. Development is confined to surface workings. Large bodies of low grade ore also exist, but the average prospector is unable to work them.

Just south of Helena there is a property called the Winscott, where a ten-stamp mill has been in operation for years; treating the ore from what is literally a mountain of ore. The deposit so far as developed, exceeds a hundred feet in width, and it is worked as an open quarry. Everything for the entire 100 feet and the corresponding distance in height is quarried and taken to the mill. The average of this ore is \$4.00 per ton. To the north and east of Helena along the Missouri river in all of the gulches that lead down from the belt range, are many quartz ledges that are worked in a small way, and ore shipped to the smelter at East Helena. A number of small quartz mills are also in operation in these mountains. In the beds and banks of all the creeks that flow through Lewis and Clark county placer gold was found in paying quantities, and the annual product of these aggregate a large sum.

The application, since the panic, of modern processes for the concentration of ore has materially increased the gold production of this county. There are a number of concentrating mills in operation in addition to the large commercial concentrator at East Helena, which is treating ores from all over the state. The application of cyanide treatment or the leaching of gold from crushed ore by solution of cyanide has been applied to a dozen mines in the county during the last couple of years, and has greatly added to the output of the district.

A number of discoveries of very rich ore have been made by prospectors recently, the most notable one being that of John Beahm on the head of the Blue Cloud gulch, where he took out \$5,000 in less than a week. The most notable discovery made during the year was the copper discovery on Mount Helena inside the residence district of the city. Two shafts are being sunk on the discoveries. One is being sunk by the manager of the East Helena smelter and some capitalists, and the other by F. August Heinze, of Butte, who has secured a large area of ground and let a contract to sink a double shaft. The astonishing thing about this mineral discovery is that it should be made on ground that has been traveled over for years. Still to the south of town, and practically inside the city limits, the Howard mine has been shipping gold ore that nets as high as \$1,500 per car. In the same vicinity are half a dozen properties, stimulated by the success of the Howard, that are developing steadily and shipping ore from time to time.

It may be said that the mineral portions of this county have scarcely been prospected, and excellent opportunities are presented to men with money, and to those who have only their energy, to make fortunes in the mining business.

There is no section of the state that offers more attractive opportunities to capital and energy than does Lewis and Clarke county.

Deer Lodge County and Anaconda.

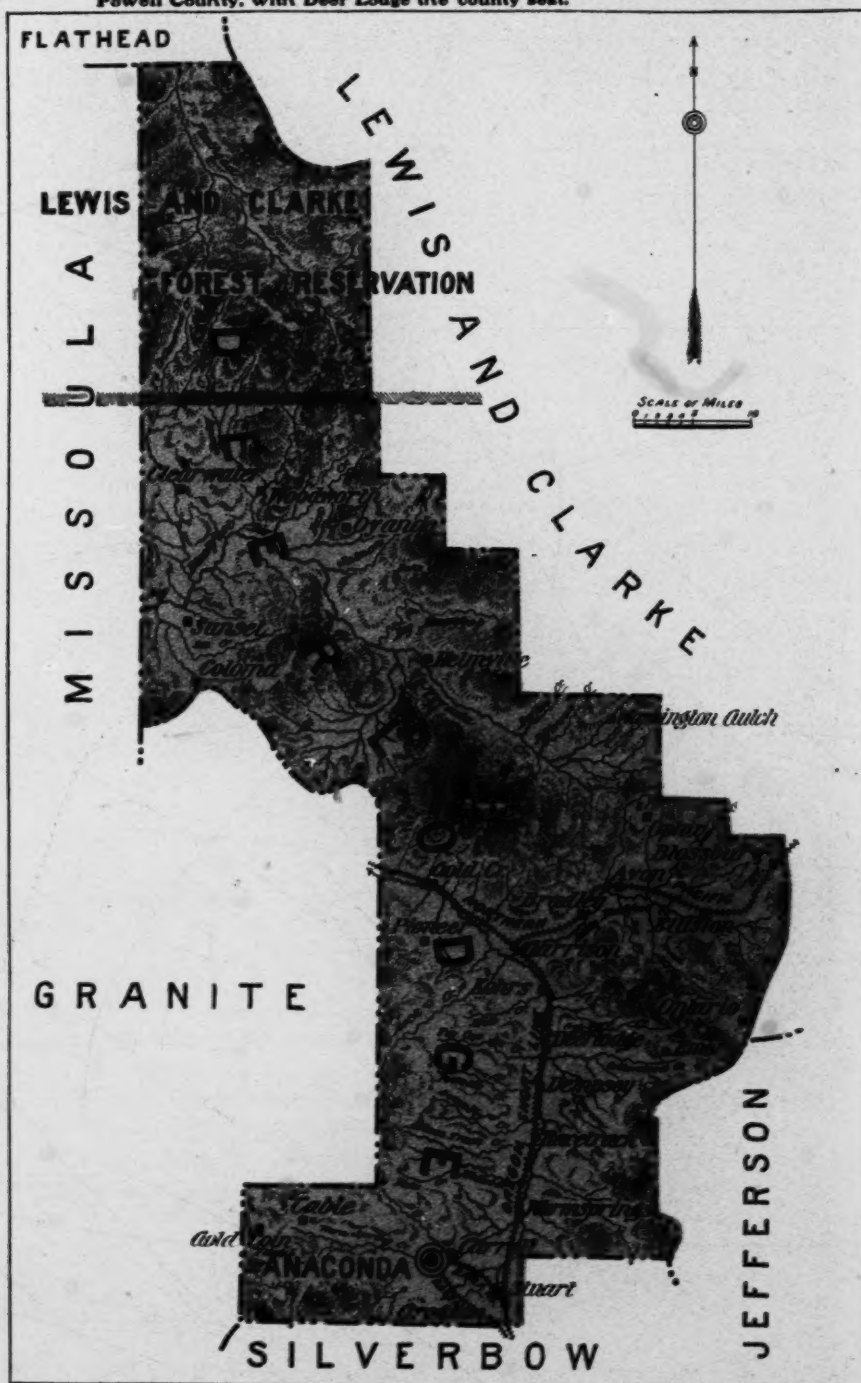
One of the Richest Mineral Sections of the State—Anaconda, Its Most Prominent City, the Location of the Great Anaconda Copper Refining and Reduction Works.

Deer Lodge is one of the western counties of the state. It is a long, narrow tract of irregular shape, extending lengthwise north and south. Teton, Lewis and Clarke and Jefferson counties bound it on the east, Silver Bow on the south, and Granite, Missoula and Flathead on the west. The county can scarcely be said to have a northern boundary, as in that direction it narrows down to a mere point.

In the early days of Montana's settlement Deer Lodge county was noted for its gold placers. None of them rivaled the marvelous wealth of Alder and Last Chance gulches, but they were numerous, extensive and rich. Those on Gold creek at Bear and Blackfoot were especially valuable. These were among the first, if not the first, of those great placer finds that made Montana famous from the very beginning of her history. The mines at Pioneer, which is on Gold creek, are still being worked with fairly good results. It is not at all improbable that many of these old surface diggings may again be made to yield handsomely and profitably by the introduction of the scientific process of modern dredging now in vogue in Alder gulch, French gulch and other places. Deer Lodge county has also contained some very valuable quartz mines, but the most of these were located in areas that have since been segregated, the great Granite and Bimetallic silver mines, with many millions to their credit, going into Granite county, while the strip taken from the east side and annexed to Lewis and Clarke, contained the rich Bald Butte mine, and many excellent prospects. Hence, Deer Lodge county's mining glory is largely in history. At the same time there is no reason to doubt that the county still contains much mineral wealth, and that systematic development work will prove it. Fine prospects abound in many parts of the county, and several actually paying properties are even now being operated. At Cable, at Georgetown, at Emery, at Ontario, at Ellison, at Helmville, at Coloma and at various points development work is being prosecuted with encouraging outlook, and it is almost certain that many of the properties will yet show great value.

It is not to be supposed, though, that Deer Lodge's mineral wealth is confined to the precious metals and those directly associated with them. Iron also abounds, and there is no doubt that the county contains extensive and valuable deposits of non-metallic minerals, such as coal, marble, fire-clay,

This County has been divided by the present Legislature, creating Powell County, with Deer Lodge the county seat.



Assessed Valuations.

Real, \$5,366,710; personal, \$2,011,669; railroads, \$626,554; total, \$8,004,933.

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etc. What appears to be a very fine quality of bluish white marble has within the last year or so been discovered about nine miles from Anaconda. When capital shall be invested in the exploitation of these resources, it is certain that they will contribute largely to the permanent future of the county.

Nor is Deer Lodge dependent entirely upon its minerals. Its mountains are well covered with timber, and it has considerable stretches of good agri-



HOTEL MONTANA-ANACONDA.

cultural lands. Its total area is approximately 4,000 square miles, and of this it is estimated that about one-tenth may be available for cultivation, some 200 square miles having already been reclaimed. The arable lands lie chiefly in the valleys of Deer Lodge, Hell Gate, Big Blackfoot and Nevada creeks. Of these Deer Lodge is the largest and most important. It extends from above Stuart nearly to Garrison, and much of it is under a fine state of cultivation. The elevation is considerable, averaging probably more than 4,500 feet, and therefore, in general, it is devoted to the hardier crops, such as hay, barley, oats and vegetables. There is an abundance of water for irrigation, and the cities of Butte and Anaconda furnish ample markets for the products of the farms. It is not strange, therefore, that this fine valley is well filled with good and substantial homes.

The town of Deer Lodge, originally known as "Cottonwood," and formerly the county seat, is located in this valley, about twenty-five miles north of Anaconda.

It is a charming country town, and the locus of the admirably kept state penitentiary, which is under the capable management of Colonel Thomas McTague, with Frank Conley as assistant. A few miles further up the river we come to the Warm Springs Asylum for the Insane, established by Mitchell & Mussigbrod. Here the state's insane are cared for under special contract, private patients being also received for treatment and care. Of this splendid institution Doctor O. I. Warren is the physician in charge, and it is needless to say that it is in good hands.

It is, though, to the city of Anaconda and its immediate vicinity that we must turn to find the business elements and activities which constitute the present greatness of Deer Lodge county. Measured by the magnitude of its industrial operations and the number of men employed, this city is clearly



HEARST LIBRARY-ANACONDA.

the second business center of the state. Here is located the greatest plant in the world for the reduction of copper ores. It is commonly known as the Anaconda smelter, and it is the property of the great Anaconda Copper Mining company. The works consist virtually of four plants, namely the Upper Works, the Refinery, the Lower Works and the Converter. They are located on the north side of the narrow valley, or canyon, in which Anaconda is situated, and beginning just abreast of the lower or easterly end of the city, they extend down the valley in the order named for a distance of nearly two miles. A trip through these works, even for the purpose of a general survey, is a good task for a strong and active person.

The Upper Works and the Lower are of the same general character, and each is a complete plant for the reduction of ore to matte which contains a little more than 50 per cent copper, together with a percentage of gold and silver. Each consists of a concentrator, a roasting or calcining department, and a reverberatory or matte department. The crushing machinery consists of one large Gates crusher and thirteen steam stamps. These are supplemented by rolls and grinding mills for fine work, while the separation of the

richer material in the ore from the poorer is done with Hartz jigs, round Evans tables and Wilfleys. In the calcining departments the concentrates are roasted and a portion of the sulphur expelled. These are equipped with Brueckner revolving furnaces, McDougalls and furnaces of the Wetthey type. The Wetthey's, however, are only at the Upper Works. The matte departments are provided with reverberatory furnaces, in which the concentrates are melted, and by the expulsion of base material, reduced to the grade of matte.

Originally matte was the finished product of the smelters of this state, and it is yet of many of them. Here, though, the process is carried further, and pure copper is produced. The matte is taken to the converter where by the beautiful pyritic process of purifying, it is reduced to ingot or pig copper, which is about 98 or 98½ per cent fine copper with the usual small percentage of gold and silver. At the converter there are also six blast furnaces which treat certain grades of ore, also producing matte, and this matte is likewise "converted" in the converter furnaces into pig copper. In all of these operations of roasting and melting the sulphur contained in the ores—which are sulphides—is utilized to aid the combustion, thereby greatly reducing the quantity of coal required. As it is, the quantity consumed amounts to 1,200 tons daily. At the converter there is a still further process—that of annealing, whereby the pig copper is put into better condition for refining. Something more than half the product of the converter is thus annealed, cast into anode plates, and in this form sent to the refinery. The remainder is shipped east for refining.

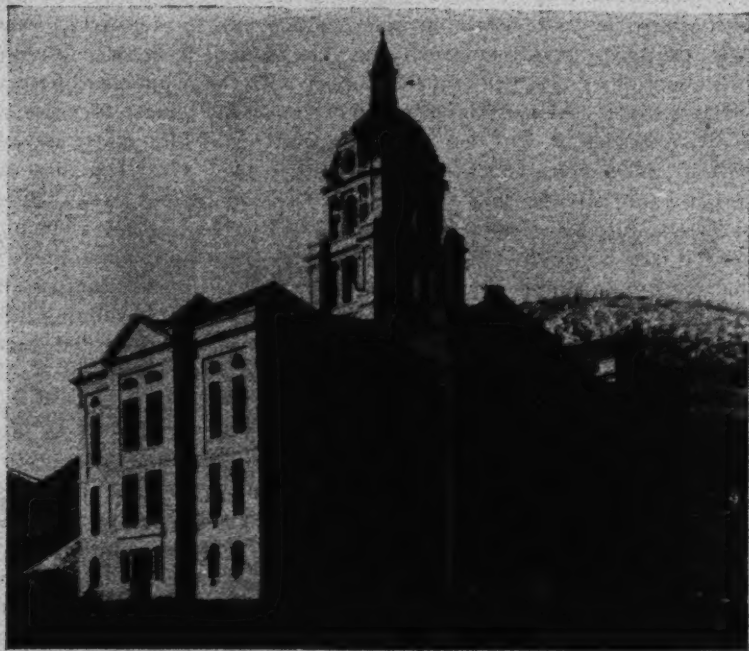
At the refinery the work of separating the gold and silver from the copper and producing the copper in a pure state is done by the electrolytic process. The anode plates are suspended in a solution of sulphuric acid from the positive or anode pole of an electric battery. Opposite to these anode plates and about four or five inches distant in the same solution are hung from the negative or cathode pole of the battery, thin strips of pure copper. The current of electricity being turned on passes first through the anode plates, which are slowly dissolved, converted into a solution of sulphate of copper by union with the acid, and then re-deposited on the cathode strips chemically pure, the gold, silver and other matter contained in the anode plates going to the bottom of the tanks. The precious metals are then separately treated and saved. The metal formed thus on the cathode plates is the pure electrolytic copper of commerce.

The total capacity of these great works is approximately 4,800 tons of crude ore each twenty-four hours. The quantity of copper, silver and gold produced, of course, depends on the richness of the ore. Taking a series of years, it is conservative to place the average copper production at one hundred and ten million pounds annually, and, at the prevailing price of copper, the total value of the product for 1900 cannot have been materially, if any, less than \$23,000,000—it may have exceeded that figure.

The ores from which these enormous values are realized nearly all come from the Anaconda company's mines at Butte, the Anaconda proper now producing the richest of the ores. They are transported by the Butte, Anaconda

& Pacific railway, which also belongs to the company, and has its main office in the city of Anaconda. This is probably the best equipped, busiest and most profitable railroad of its length in the world.

As an adjunct to its mines and smelters should be mentioned the Anaconda company's magnificent foundry, which is located at the lower end of the city, and just across the valley from the Upper Works. This foundry devotes itself primarily to the company's own work, but it also turns out much new machinery, and does a large amount of repairing for other companies and individuals. The plant is thoroughly equipped for all kinds of



COUNTY COURT HOUSE—ANACONDA.

foundry, machine, boiler and blacksmith work, and can turn out almost anything, from a bolt to a steam engine.

The Anaconda company has, in round numbers, 2,100 men regularly employed at the smelters and brick yard; there are about 400 men at the foundry, and some hundreds at the Anaconda end of the railroad. Altogether the company gives regular employment to about 3,000 people, while fully 1,000 more are carried on the pay-roll, and have employment a goodly portion of the time. The monthly pay-roll can scarcely call for less than \$300,000.

The great plant thus hastily sketched has been built piecemeal and represents in the aggregate an investment of perhaps ten million dollars. Beginning when smelting was in its infancy, constant changes have been necessary to bring it up abreast of the times and keep it there. This has been difficult, expensive, and in some respects, not altogether practicable. Millions of dol-

lars have been expended in improving and modernizing the works, and still there is much to be desired. As the different parts were built, it was necessary to string them out lengthwise down the valley, which is an obvious disadvantage, separating the various departments by considerable distances. The science of ore treatment has been making steady progress during recent years, and the only way to have a smelter that is in the strictest sense modern is to build one all at once, in order that all the parts may be in harmonious and close connection. Marcus Daly fully recognized this truth, and for a long time before his death had in contemplation the building of a new smelter which should not only be the largest in existence, but the best of its kind that human skill could devise. Even before Mr. Daly's serious illness began, this great work had been actually set in motion. The Amalgamated Copper company, of which he was the president, had been formed. This company obtained not only control of the Anaconda properties, but those of the Parrot, Colorado, Washoe and Butte and Boston companies, as well as heavy inter-



A BUSINESS STREET—ANACONDA.

ests in others. Anaconda is another advantageous point for the treatment of Butte ores, combining as it does eligible building sites, with abundance of water, and ease of transportation. Accordingly, about a year ago it was finally and definitely decided to build a new smelter on the opposite side of the valley from the old works.

Everything connected with this grand enterprise has been conceived on a magnificent scale. The site is a most commanding one. Just at the mouth of the Warm Springs canyon, or valley, on a bold spur of the mountain which forms the western boundary of the canyon the vast works are being erected, and from this point may be had a most inspiring view of the Deer Lodge valley as it stretches away to the east and north, with its broad expanse of rich fields dotted with comfortable homes. The main buildings are all to be of steel, and they will consist of the concentrator, the roaster, the reverberatory or matte building, the converter and blast furnace building—no refinery

at this time being in contemplation. This will make a complete plant for the production of pig copper which will run about 98½ per cent fine.

A moment's consideration of the dimensions of the main buildings will give a fair idea of the magnitude of this giant of smelters. The concentrator will have a length over all of 625 feet and a width of 349. It will be in two sections with the power house between them. The roaster building is 330 feet long by 98 feet wide; the reverberatory or matte building, 408 feet long by 176 feet wide; the converter 462 feet long by 174 feet wide, and the blast furnace building, 280 feet long by 82 feet wide.

The concentrator building will occupy the highest ground, the ore reaching the bins by means of a spur from the Butte, Anaconda and Pacific railroad. From the concentrator the material will move constantly to lower



HOSPITAL—WARM SPRINGS.

levels, until the finished product, the pig copper, is ready for shipment from the doors of the converter. Hence, gravity does a vast amount of work that must otherwise have called for steam power and expensive machinery. Some important changes will be made in the machinery, but they will appear less radical than if they had been made two or three years ago; for the changes at the old works have prepared the public, in a measure, for the innovations at the new. For example, the huge steam stamps will be dispensed with entirely, and crushers substituted. But one of the stamps at the old works was torn out nearly a year ago, and a Gates crusher put in its place. Again, at the new smelter, the roasting furnaces will all be of the McDougall type. Four of these, however, have been in successful operation for some time at the upper works of the old plant, and a number of others have recently been installed at the Lower Works. So there will be nothing radically new to the public in the McDougalls. In the matte department the principal change will be in the greater size of the furnaces, although every effort will be made to have them of the very best possible construction. The McDougalls will be

48 in number, each with a daily capacity of fully 50 tons on concentrates—practically 2,500 tons—which will represent 5,000 tons of ore before it is concentrated. And about 5,000 tons is to be the rating of the smelter proper, although the capacity will actually be much greater through the aid of five blast furnaces, which will be capable, in themselves, of reducing 2,000 tons of ore daily to the grade of matte. For these works two power plants will be required, each representing 6,000 horse-power. The stacks will be set high on the hill to effectually carry off the fumes. They will be of steel, self-sustaining, lined with brick, each 200 feet in height and 20 feet in diameter. As necessary incidents to this great plant, special railroad facilities will be required, and for that purpose about seven miles of new tracks must be provided. Water also will be needed in abundance, and to supply this indispensable want a flume four miles in length will connect the works with the



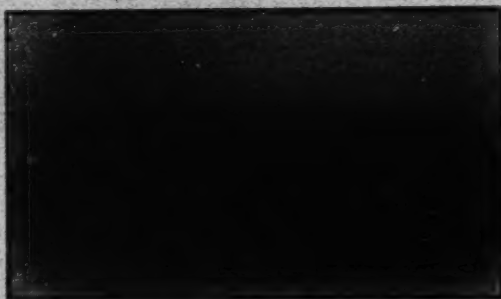
STATE INSANE ASYLUM—WARM SPRINGS.

waters of Warm Springs creek, well up the canyon. It is estimated that these works, in their entirety, will represent an expenditure of from \$5,000,000 to \$6,000,000.

It must not be supposed that this enterprise is merely in prospect. It was, in fact, begun last June, and is now well under way. The roaster and blast furnace buildings are almost finished, the concentrator power-house is in course of erection, and machinery is being installed; the foundations for the concentrator and reverberatory have been commenced, and work will soon be in progress on the buildings themselves. From 400 to 500 men are engaged in this work, besides those employed excavating for the railroad and the water ditch. It is believed that the plant will be entirely finished in the course of a year, and some parts of it may be utilized very much sooner.

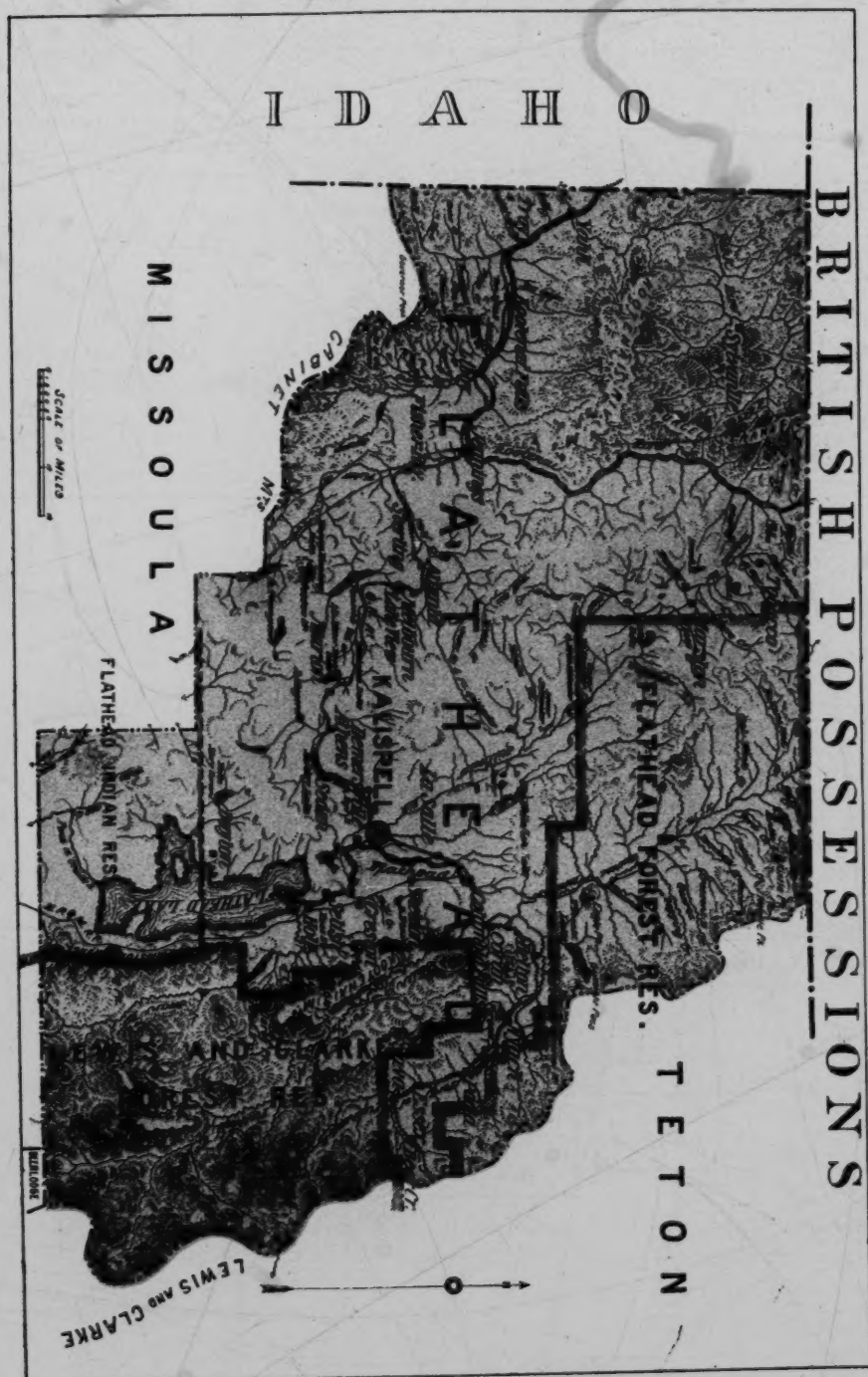
It requires no gift of foresight to enable a person of the commonest understanding to see that all of this means many years of increased and increasing prosperity to Anaconda, and consequently to Deer Lodge county. These works are being erected by one of the strongest financial concerns in the United States, and those at the head of it are among America's shrewdest financiers. There can be no doubt that before incurring this extraordinary expense, the most exhaustive inspection was made of the mines constituting

the source of the ore supply, and that the inspection was satisfactory. It is certain that the mines of Butte have a long lease of life before them. This means that as long as the mines of Butte hold out the Anaconda smelters, both new and old, will continue to run, and that relatively more and more of the ores will be treated here. The knowledge of these facts will encourage public spirited men to erect more and better business buildings, more and better homes. With its fine public buildings, its street car service, its electric light and water systems, and with its 10,000 intelligent and energetic people, Anaconda is already a little giant among western cities, but every sign now written on the horizon of the future indicates that its prosperity has but just begun. And as its chief city grows and flourishes, so must Deer Lodge county as a whole share in the benefits, while its people may look forward to still better things as the years come and go.



BIRD'S-EYE VIEW DALY RANCH.

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Assessed Valuations.

Real, \$2,108,905; personal, \$981,406; railroads, \$1,059,258; total, \$4,149,569.

Flathead County.

One of the Most Prolifically Fertile in the State—Its Resources, Agriculture, Horticulture, Lumbering and Mining—Magnificent Scenery—Congenial Climate—The Hunter's Paradise—Its Future Assured, and Its Possibilities Almost Unrivaled.

In the northwest corner of Montana and west of the Rocky mountains lies the new county of Flathead, having an area of 8,700 square miles, greater than Connecticut, Delaware and Rhode Island combined. With the present population, each inhabitant could occupy nearly one square mile, so it is evident that there is ample room for immigration. Six hundred and seventy thousand acres have been surveyed and appropriated, while about four million acres are still unsurveyed.

A large portion of the county is of a hilly and mountainous nature, whose sides are covered with dense forests, principally of pine, fir and tamarack. The prospector is showing that these mountains are richly seamed with gold, silver, copper and lead. Throughout the county are numerous fertile valleys, whose agricultural possibilities are marvelous.

The largest of these valleys, known as the Flathead, is 35 miles in length, with an average width of 15 miles, and its altitude is about 2,900 feet above sea level.

Kalispell, the county seat of Flathead county, has a population of about 3,000, and is beautifully located on the Stillwater river, about five miles north of the northern extremity of Flathead lake. It is a division point on the Great Northern railway, has eight church organizations, graded schools, county high school, two national banks, flour mill, United States land office, electric lights, waterworks, good stores and hotels, two newspapers, one of which is a daily, fire department, and is the supply point for an extensive agricultural, mining and lumber district. There are yet excellent opportunities for farmers, miners and lumber men in the surrounding country. The other towns in the county are Columbia Falls, where the state Soldiers' Home, a popular institution, is located; Libby, Troy, Sylvanite, Dayton, Holt and Tobacco. All are thriving towns and are doing a prosperous business.

Nestled among the mountains, and on the west side of the Rockies, the ranges to the north and east act as barriers against the cold winds, while the passes in the Cabinet range to the west invite the warm breezes from the Pacific coast that temper the climate and precipitate an abundance of moisture, thus insuring excellent crops without the need of irrigation. It is this bountiful supply of moisture which makes its agricultural possibilities

almost unlimited, as it is found that the same phenomenal crops are produced without irrigation as are grown in the Gallatin and Yellowstone valleys under irrigation ditches.

Nine years ago scarcely 2,000 acres of land in this valley were under cultivation; today over 10,000 acres have been turned with the plow, and there still remains a large area of land untouched.

The land is exceedingly rich, being composed of the washings of ages from the great mountain ranges, making a soil similar to that of the best portions of the Mississippi valley.

There are three classes of agricultural lands; the higher bench lands,



which are sandy with gravelly and clay sub-soil, the lower bench lands having a sandy loam from one to three feet in depth with clay sub-soil, and the bottom lands possessing a rich black loam with clay sub-soil.

Seeding commences about the first of April, and harvesting the first of August. One of the principal crops is hard wheat, rivaling that raised in the famous Red River valley of North Dakota. The yield is from 25 to 40 bushels per acre, and the surplus which our local flour mills do not use, is sought for by the mills of other cities of Montana. Oats, barley and rye are grown with proportionate results. Flax, timothy, millet, alfalfa, tobacco and clover are raised with great success, and the yield surprises the farmers who come from the east.

We have placed exhibits of our grains and grasses at various state fairs, and have been awarded first premiums over any exhibits of several of the middle states. Average yields per acre are: Hard wheat, 31 bushels; oats, 64 bushels; barley, 39 bushels; rye, 30 bushels; potatoes, 257 bushels; tim-

othy, $2\frac{1}{2}$ tons. All kinds of vegetables and root crops grow large and produce abundantly.

Besides timothy, alfalfa, red, alsike and white clovers and brome grass, orchard grass, blue grass and red top produce heavy crops. Rutebagas and turnips weigh from 20 to 30 pounds each, and all root crops in proportion. Rape and rape seed are being grown with fine success.

The government weather bureau at Kalispell reports an average rainfall of 19.56 inches.

Fruit raising is not yet a standard resource, as the country is too new to



A PRODUCT OF THE VALLEY.

have any extensive orchards, but it is beyond the experimental stage, and in a few years will be vieing with the Bitter Root valley in shipping fruit superior to that of the Pacific coast states.

There are about 1,000 bearing fruit trees of mixed varieties set out about 8 or 12 years ago, 5,000 young trees just coming into bearing, and 90,000 trees have been set out in the past four years.

Apples, pears, plums, cherries, also the small fruits, such as raspberries, strawberries, currants, etc., bear most prolifically.

On the Fourth of July for several years past prizes have been awarded to the party bringing in the greatest variety of flowers and grasses, and one party brought in 203 varieties of flowers and grasses.

Fuel, fencing and lumber, which are great items of expense in the prairie states, are here obtained for the mere labor of cutting and hauling.

Our farmers find the raising of dairy herds, hogs and poultry a substantial source of profit, as the mining camps throughout the state offer a ready and steady market.

Among the most pleasing features to a settler coming from the east are

the 24 school houses and 16 churches throughout the valley, which speak plainly of a law-abiding and civilized community. Kalispell (the new county seat) and Columbia Falls are the important towns and shipping points in the valley.

In the Tobacco Plain country, which lies about 90 miles northwest of Kalispell, there are several townships of rolling prairie grazing and timber land. Along the Kootenai, Fisher, Libby and Yahk rivers, also the smaller streams emptying into the same throughout the western part of the county, there are tracts of fine meadow and park like lands.

The latter when cleared of their fine commercial timber will make rich agricultural lands, and in that respect differ greatly from the prevailing condition of the pine lands in Michigan and Wisconsin, for a great portion of our timber land when cleared is well adapted for agricultural purposes.

The pronounced timber area is 60 by 100 miles in dimension, and logs are easily brought to the sawmills or the railroad by the numerous streams and rivers which abound throughout the county. The timber is white pine, yellow pine, tamarack, fir, cedar, spruce, birch and cottonwood. Twenty sawmills are now at work converting a small part of this immense resource into a means of wealth.

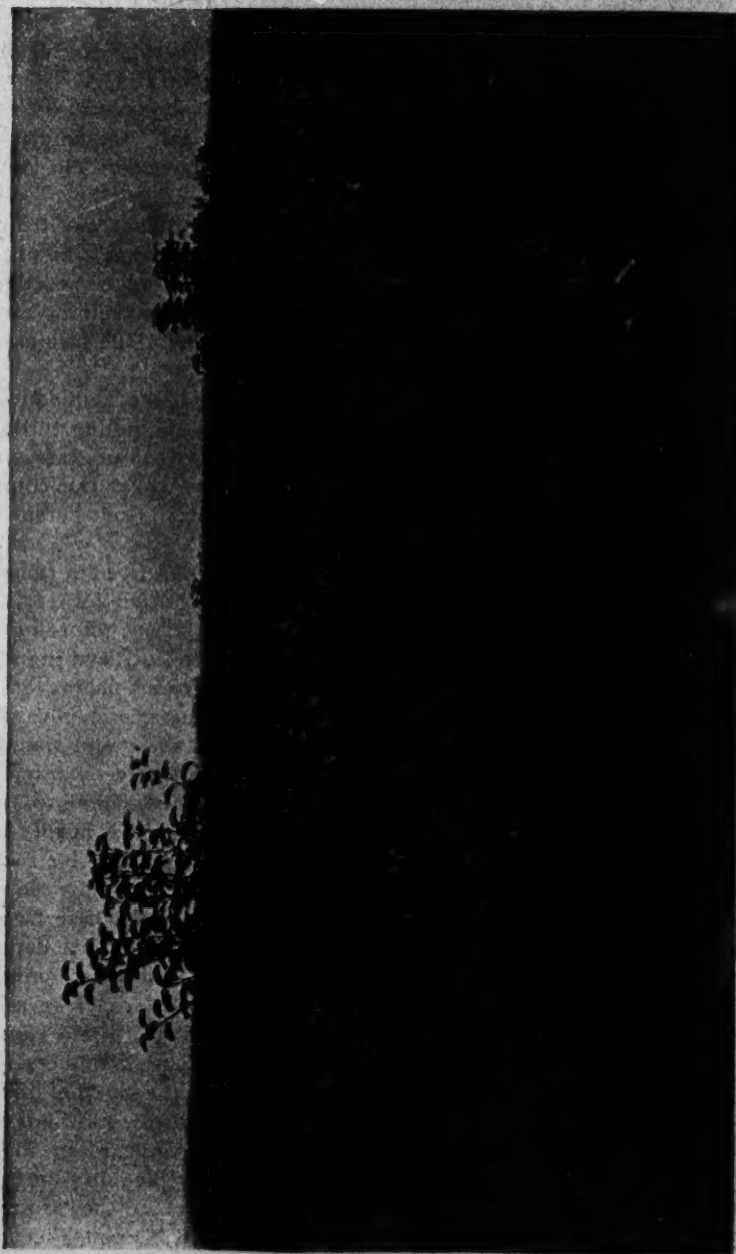
The output at present is 50,000,000 feet per annum, and increasing each year.

In the northern and eastern portion of the county are hidden great measures of a splendid quality of lignite coal as yet undeveloped. Adjoining these coal fields are tracts of oil lands and positive indications of natural gas.

From the Tobacco Plains country the Kootenai river flows southerly some 50 miles, then turns and flows westerly 40 miles, where it enters into the state of Idaho. In this short distance the Kootenai receives as tributary streams Fisher river at Jennings, Libby creek at Libby, and Lake and Callahan creeks and the Yahk river near Troy, thus draining an immense area of mountainous timbered country. On Fisher river is located an extensive group of gold bearing quartz mines only partially developed as yet, but giving rich promise.

The mines of the Libby district are almost situated on a contact between a slate and quartzite formation which begins about five miles southwest of the town of Libby, and has been developed for a distance of 20 miles. The veins vary in width from five to six feet, and the ore is Galena, which, though not high grade, is worked at a profit at present prices. The most prominent mines in this district are the Shaughnessy Hill, Silver Cable and Snow Shoe groups. The last mentioned group is owned by an English syndicate that has expended over \$300,000.00 on the property, which is now in successful operation.

Within a radius of 25 miles of Troy there are five mining camps, all connected with that town by wagon roads. The principal mines are the Bull river and Bull Lake copper groups, the Rouse Mountain Silver group of some 40 claims, the Banner Mountain group, including the well known Banner & Bangle and the Big Eight Hour Silver Lead mines. There are paying placer gold diggings on Callahan creek, Yahk river, Moyea river and Kootenai river.



A YOUNG ORCHARD IN FLATHEAD COUNTY.

The government prairie land in the Flathead valley proper is all taken up, but by going into outlying portions of the county, prairie, meadow and timber lands can be found for settlement.

In the county, as shown above, there is room for several hundred settlers on government and unsurveyed meadow and timber land.

In the winter the thermometer ranges from 10 to 40 degrees above zero, and we only have an occasional cold snap dropping it below. In summer the mercury ranges from 50 to 85 degrees, and seldom goes above 90. The annual precipitation of moisture is about 20 inches.

A ready market for all of our products, grain, hay, produce and fruit, is found in the mining camps of our own state. Aside from what agricultural products are raised in Montana, hundreds of thousands of dollars worth are shipped in from outside of the state to supply the markets of our mining camps and cities, hence, one can readily see that a home market for the farmer will always be available.

This county, with its moderate climate, bracing air, the abundance of purest water found in springs, streams, rivers and lakes abounding throughout the county, as in Northern Minnesota, the luxuriant growth of grasses and clovers, and the perfect combination of forest and prairie, makes this country one especially adapted to the raising of dairy and beef cattle, draft horses and trotting stock, sheep and hogs.

The eastern portion of Flathead county is made up of the main range of the Rocky mountains, and contains a combination of mountain scenery, glaciers, lakes and sylvan forests unsurpassed on this continent, affording the tourist an opportunity to feast the eye and soul upon the beauty and grandeur of nature, and the sportsman a chance for magnificent trout fishing in the mountain streams and lakes, and the hunting of ducks, geese, pheasants, grouse and larger game, such as deer, elk, bear, mountain sheep and mountain goat. For a person with energy, pluck and ambition, no better country can be found than that of Flathead, as with these qualifications, combined with the natural resources of the country, success is sure to follow. A farmer with from three to five thousand dollars can purchase and equip a quarter section of the best land, which will yield him returns of from 25 to 50 per cent per annum on his investment. Several instances could be quoted where farmers in the past three years have made from \$2,000 to \$10,000 each, and the deposits in the banks are ample evidence of the prosperity of the farming community.

The already large lumber business of the county has been given a new impetus by the installing of a large plant here by the John O'Brien Lumber company, which has already contracted for 30,000,000 feet of timber. Just now the company is building a railroad from Kalispell to the location of their mills near Flathead lake. According to present plans, the saw mill will have a capacity of 300,000 feet for every 24 hours. This will give Flathead lake the largest lumber output in the state. The railroad is twelve miles long, and has been built entirely by contract; that will also be true of the cutting of logs. During the winter the contractors who cut logs will employ not less than 700 men in the woods, and possibly 1,000.

The managers of the mill assert that the quality of the timber tributary to their mill is of the best quality, and that it will last for many years.

The Great Northern railway company has discovered a chemical treatment for ties that will make them endure for thirty instead of ten years, and will erect a plant at Kalispell the coming year for the treatment of the ties. This will create an added demand for ties from the abundant timber of Flathead county, and will as well contribute to the growth and prosperity of Kalispell.



FLATHEAD FRUIT EXHIBIT.

Ravalli County and its Resources. ♪ ♪

The Bitter Root Valley, One of the Noted Agricultural and Horticultural Localities of the State—Farming, Lumbering and Mining—A Delightful Climate.

Among the different sections of the state remarkable for their varied attractions, that of the far-famed Bitter Root valley, the paradise of the state, stands unsurpassed. This valley lies in the extreme western portion of the state, and for wealth of field and forest, loveliness of landscape, and fine agricultural and mineral resources, it outranks all other sections of the state.

The valley, which is seventy-five miles in length, and with a varying width of from five to twelve miles, derives its name from the beautiful flower of the Bitter Root, known to botanists as the *Lewisia Rediviva*, which, with its dainty pink petals, makes fields and roadside beautiful in the months of May and June.

Through the midst of the valley, from south to north, winds the noble stream of the Bitter Root, with a large volume of water, fed continually by the crystal mountain streams, whose never-failing source of supply is the eternal snows lying on the summit of the lofty mountains encircling the valley. On every hand, the scenery is magnificent beyond description, defying the utmost power of painter or poet to correctly portray its beauties and grandeur. On the west one beholds the mighty range of the Bitter Root, rising abruptly to a height of ten thousand feet, broken at intervals by the narrow canyons through which course the musical mountain streams. Locked in the granite fastnesses are beautiful parks, and close beneath the icy peaks of the summit are the pellucid waters of many a mountain lake in which are mirrored the images of the strange and beautiful with which they are surrounded, all of which art may seek to imitate, but its only merit will be in its slight resemblance to the real. At the base are forests of gigantic pines; above these lie the great fields of snow that seem but white flecks in the distance, while cascades falling from unseen heights into the dark canyons below seem but silvery threads on the landscape. Towering above and over all are Nature's battlements, hundreds of snowy peaks, either "bathed in the tenderest purple of the distance" or flashing back to the valley the rays of bright sunlight. Everywhere along their sides and summits the aerial tints from the hand of the great Master are as shifting and changeable as the eastern skies at sunset. Take all the songs the immortal singers have sung of Alpine heights



Assessed Valuations.

Real, \$1,654,030; personal, \$1,108,300; railroads, \$165,165; total \$2,927,495.

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and they would still fail to reveal the surpassing loveliness of this Bitter Root range.

We look to the east of the valley and find the silvery peaks and pine-clad slopes of the Rockies, bearing in their bosoms myriads of undeveloped mines, their summits strikingly beautiful, ever changing and ever new. And between these great ranges lies the valley teeming with prosperity and gladness, with its hundreds of happy, comfortable homesteads, its flocks and herds, and its

fertile, well-cultivated fields, abounding in the choicest fruits, vegetables and grains.

Stevensville, with a population of three hundred and fifty persons, is the oldest town in Western Montana. It was laid out in 1864, and named in honor of the first territorial governor, who had previously made a treaty with the Flathead Indians at St. Mary's Mission. When Ravalli county was created



HEAD WATERS CANYON CREEK.

Stevensville was made the county seat, and held the same for six years, and its subsequent removal to Hamilton has not materially affected the growth and prosperity of the town. Situated twenty miles north of Hamilton, on the east side of the river, about one mile from the railway, in the heart of a rich and flourishing fruit and agricultural country, it will continue to stand foremost as a shipping and trading point for farm produce. An historic interest still attaches to the dilapidated walls of Fort Owen and to St. Mary's Mission, adjoining the town, which still stands in a good state of preservation, a memento of the self-sacrificing life work and the burial place of Father Ravalli. The town has a good graded school building, four churches, a large hotel, three general merchandise stores, two drug stores, two hardware and one grocery store, a meat market and three blacksmith shops. It also has a free reading room, two lawyers, two physicians and a newspaper. Substantial new residences are being erected each year, and Stevensville will soon become one of the most desirable residence towns of Western Montana.



GEN. CARRINGTON TREATING WITH THE FLATHEAD INDIANS AT ST. MARY'S MISSION, RAVALLI CO.

Corvallis, another pretty country town, is also situated in the heart of a very rich farming and fruit growing country. It has two first-class general merchandise stores, a fine graded school building, three churches and a number of very fine residences.

Victor, a flourishing little village on the west side of the river, came into existence with the advent of the Bitter Root branch of the Northern Pacific railway in 1888, and is the trading point of a large section, and also the shipping point of the Curlew and Pleasant View mining districts.

Twenty miles south of Hamilton, at the upper end of the valley, is situated the little town of Darby, with immense forests of pine, upon which little impression has yet been made. The town is now the trading center of the farmers of Ross Hole, and the miners of the rich Hughes Creek placer country. With the extension of the railway up the valley, Darby will become a populous and flourishing town.

Grantsdale, the present terminus of the railway in the valley, and Florence, the supply point of the White Cloud mining district, are each good, growing trading towns, with much valuable farming and fruit land in their immediate vicinity.

Hamilton, the metropolis and county seat of Ravalli county, is a beautiful growing town of two thousand inhabitants, situated on the railroad on the east bank of the Bitter Root river, near the center of Ravalli county. The town was laid out in 1890, and afterwards incorporated, and is famed for its beautiful, healthful surroundings, excellent city government, its extensive system of water works, hotels, electric lights, schools and churches; but first of all as the center of the Anaconda Copper Mining company in Western Montana, and for the home and magnificent stock farm of Marcus Daly. The city has enjoyed a steady, substantial growth since its organization, until it has distanced all competitors in the valley, and will continue to be the metropolis and business center of the manufacturing and farming interests of the county. The general growth and prosperity of the town has been primarily due to the efforts of the Anaconda Copper Mining company, which commenced industrial operations in the valley in 1890 under the name of the Bitter Root Development company, with the object of making available for commerce the magnificent timber resources of the valley. For this purpose extensive works have been constructed. A substantial dam has been placed across the swift current of the river, and the lumbering plant of the company comprises a magnificent sawmill, having a capacity of two hundred thousand feet of lumber per day, with all the latest improvements for caring for refuse, and the handling and cutting of logs and lumber, and employing men at good wages the greater part of the year. In connection with the sawmill, there is also a lath-mill, a planing mill and a sash and door factory, from which is turned out both plain and the most artistically carved ornamental work. The logs for the mill come from the vast forests lining the river and the tributaries of its upper course, and to prepare them for the mill an army of men are employed in the logging camps during the winter. The mill pond covers an area of about two hundred acres, and has a capacity of thirty million feet of logs, and a ready market at an advancing price is found in the state for all the lumber cut.

Besides the lumber industry, the Anaconda Copper Mining company carries on an extensive mercantile business. It has here one of the largest and most complete department stores in the northwest, carries in stock a very large stock of hardware, groceries, dry goods, boots and shoes, clothing and

furniture. These great interests of the company are all managed by the most skillful and experienced specialists in their special departments, and conducted on principles of strictest business integrity. Still room has been found for extensive competition in the mercantile business. Besides the company stores, there are also two general merchandise stores, a grocery store, a book store, five fruit and confectionery stores, two clothing stores and three meat markets, all doing an excellent business.



RAVALLI HOTEL—HAMILTON.

Hamilton has three hotels, including "The Ravalli," which is pronounced to be one of the most elegantly equipped hostels in the northwest. The town is also supplied with a most excellent system of water works, which conducts pure, cool mountain water from Skalkaho creek to the city. Water mains for a city of ten thousand inhabitants have already been laid, and the electric

light system is as perfect as that of any city in the state. The town has a fine banking establishment, a modern, up-to-date flouring mill costing twenty thousand dollars, six churches well supported and well attended, two fine public school buildings, with a well equipped high school under the most competent management, three newspapers, six physicians, six lawyers and two dentists. The mills and stock farm give Hamilton a pay-roll of many thousand dollars, monthly, and the town is destined to become distinctly a city of homes. Its beautiful surroundings and extensive improvements have already made it famous, and its further growth and prosperity are assured.

It is, true that in the western part of the United States physical conditions



A NORTH SIDE SCHOOL HOUSE—HAMILTON.

similar to those of ancient Egypt and Assyria prevail. The clouds, with gentle showers, are no longer depended upon to fructify the fields. They do not hover over valley and plains, but gather about the giant mountains, hurl their storms against the rocks, and feed the rivers. But truly conquered rivers are better servants than the wild clouds, and through the agency of irrigation, the lands, watered by streams and domed by clear skies, prove the best agricultural lands of the continent. These are the conditions of agriculture in the

beautiful Bitter Root valley. Here the necessities for the most perfect, the most vigorous plant life are met in the abundant water and sunshine, and the fields of grain, the orchards and gardens far excel those of the east in luxuriance and productiveness. For twenty-five years there has not been even a partial failure of crops in the Bitter Root valley. Here nature is indeed prodigal. In May and June copious showers descend on the low bottom and alluvial soil in sufficient quantities to assure good crops. On the lighter soils where the gravel comes near the surface, and on the granite lands, where the soil is composed of fine particles of disintegrated granite washed from the mountains, irrigation is necessary for the raising of crops. In the east these lands would be considered useless for agricultural purposes, but when once the water is applied to the arid soil, lo, it blooms as the rose, and the process of irrigation is a very inexpensive one. All the water necessary for the growing crop may be readily obtained by means of lateral ditches, through which the water from the river or the numerous creeks, supplied by the mountain streams, may be directed. Each farmer constructs a ditch for his use from the nearest available stream, or frequently several neighbors may build what is termed a company ditch, large enough to conduct water sufficient for all, and the water from the main ditch is conducted to the land of the individual through the lateral irrigation ditches. These ditches, or the share the individual may have in them, may be sold as a portion of the real estate, so that when a purchaser invests in land, he may also acquire with it sufficient water to irrigate the land for all time to come, and no annual rental is paid for the water. While Montana has not made the progress of other states in the creation of irrigation districts and the laws regulating the use of water, nature has so abundantly supplied this valley with rivers, brooks and lakes that there is very little trouble in securing an adequate supply of water for all necessary purposes. Large canals, miles in length, conveying in the aggregate over thirty thousand miners' inches of water, have already been taken from the river, and hundreds of smaller ditches from the mountain streams cover the high bench lands, where some of the finest crops in the valley are grown. When it is remembered that the great reservoirs in the form of snow on the mountain slopes are inexhaustible, and no matter how long the rain may fail to fall, or with what intensity the sun may send down its rays of burning heat, still the supply of moisture that shall speed the growing crops is unfailing, one realizes what farming in the Bitter Root valley means. Here the economy of nature furnishes not only a constant and perfect supply of sunshine, but by the hand of man comes a constant and perfect supply of water. Here the green of prosperity may never fade into a sickly saffron, nor is the vegetation beaten down by storms or drowned by floods, and there is not an acre of agricultural land in the valley that cannot be made available for crops. An acre of this seemingly worthless land once supplied with water, immediately acquires a value astonishing to men of the east, for it will produce two or threefold the quantity of food for man or beast that an acre will there during the average year. Is it to be wondered then that farming in the valley pays?

The farmers' calling, though proffering no sudden leaps, no ready short cuts to opulence, is the surest of all ways from poverty and want to com-

fort and independence. "Other men must climb; the temperate, frugal, diligent farmer may grow into competence and every external accessory of happiness,"

That the soil and climate conditions of this valley are highly favorable to the pursuit of that most independent of all callings, farming, is shown by the success attending the various agricultural experiments that have been made. The diverse character of the soil in different sections thus far has made it im-

possible to determine just what can and what cannot be raised on Bitter Root soil. The last few years have been years of experiment on the part of our most progressive farmers. As a result crops are being raised today that a few years ago would have been considered impossible. It may be said without exaggeration that all crops common to the temperate zone may be grown here, with astonishing results.

LOGGING ON THE BITTER ROOT RIVER.

With proper cultivation and irrigation, wheat will average from thirty to sixty bushels per acre, barley and rye fifty bushels, oats from sixty to one hundred bushels, potatoes from four to six hundred, and many varieties of corn are cultivated with success, while all kinds of garden vegetables grow perfectly and in abundance; and are not excelled in quality or flavor. But while there is much farming on a general scale, the chief attention of the farmer is given to the raising of grain and hay and to orcharding. The valley lands seem particularly adapted to all kinds of grasses. The damp bottom lands make fine hay farms. Timothy yields from two to four tons per acre and grows exceptionally well on the higher lands when irrigated. Finer clover fields than those found in the Bitter Root valley do not exist. Both red and white clover grow anywhere here with a limited amount of water, and do not run out for years. Alfalfa yields enormously, and from two to three crops are cut each year.

Among the most productive branches of farming are dairy-
ing and raising of poultry. Both constitute a most profitable source of employment in any country, and there are all the elements of success in these lines to be found here, but the field thus far remains comparatively undeveloped,



CONSTRUCTING AN IRRIGATION DAM—RAVALLI CO.

although farmers are gradually paying more attention to it as there is a greater demand for such products at a fair price. With an abundance of nutritious food, cool mountain streams and springs abounding everywhere, and with the improved breeds of dairy stock on nearly every farm, the valley should furnish nearly all the butter required for consumption by the population. With good butter bringing from twenty to thirty cents the entire year, the business proves a paying one, and milk always brings from twenty to thirty cents per gallon. Very little attention has been paid to the making of cheese, the foreign article being found chiefly for sale. Dairying on a large scale could be carried on with the finest success, and good creameries, similar to those in eastern states, would prove a very profitable investment here.

In the valley the raising of poultry has proved a most remunerative pursuit, though until quite recently it did not receive the attention it merited. The dry, invigorating atmosphere and days of continuous sunshine afford conditions extremely favorable to poultry-raising. The market is all that could be desired, as the supply is always inadequate to the demand. Eggs produced from the ranches always bring a higher price than those shipped in from eastern points. The prices usually range from twenty to forty cents per dozen, and there is sufficient profit in the poultry business generally, when rightly conducted, to be an inducement to take it up as an exclusive pursuit. Hitherto the majority of our farmers have directed their attention almost exclusively to the rearing of stock and the raising of grain, so that this small but paying line of farming has received but little attention. The field is a good one with wonderful possibilities for the person who understands the business.

Formerly in Western Montana, and especially in the Bitter Root valley, while it was uncultivated and there was an abundance of native grass, the raising of stock was one of the foremost industries. Even at the present time the foothills of the valley are covered with a luxuriant growth of nutritious bunch grass, which gives an ample pasturage for thousands of head of stock during the entire year with the exception of a few weeks in winter. An excellent market is found for beef and mutton in the state, and the raising of stock has always proved a most lucrative business.

Montana's reputation as the "Treasure State" depends no longer entirely on the immensely rich mines found within her confines. With the astonishing progress made in late years of her resources, she bids fair to become a banner fruit producer of the northwest. Today 13,500 acres of land in the state of Montana are devoted to fruit raising. Of this number six thousand acres are in the Bitter Root valley, which carries the palm in fruit producing, both as to quality and quantity, and the output of apples shipped to the eastern market has been of a nature to surprise the purchaser and delight the producer. Fruit growing is as yet in its infancy in the valley. In 1867, Philip Ritz set out 1,000 fruit trees on the Fort Owen ranch near Stevensville, but they were destroyed by grasshoppers. The next year Thomas Harris planted the first successful orchard in the valley on the farm now owned by May Brothers, who have since become the most extensive fruit growers in the valley, set out one hundred trees shipped to them by mail from Plymouth, Mass., and since that time they have annually set out fruit trees until the Pine

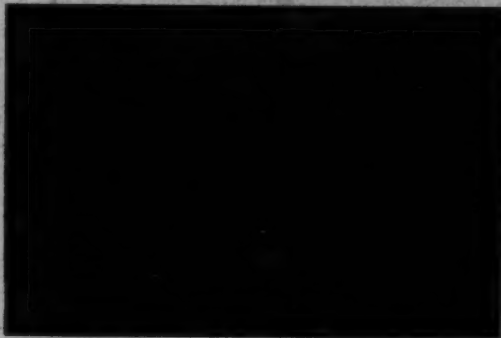
Grove fruit farm is famous throughout the state of Montana, having one hundred acres in fruit and over ten thousand bearing trees. Last year they shipped fourteen cars of apples. The fruit grown in the valley is perfect in every respect, and the market is without limit. Thirty years of experience has demonstrated that fruit culture here is a most profitable enterprise. Only once during all of that time have the trees been seriously damaged by the cold. Land set with Alexander apples twelve years ago is now annually yield-

ing as high as five hundred dollars per acre. No more inviting field is open anywhere to the industrious man with limited capital, than the possession of several acres of land in this valley devoted to fruit culture. Residents of the valley are becoming alive to this fact, and up and down its length one will find, on nearly every farm, thrifty orchards, while many persons have gone into the business on a very extensive scale. The Bitter



BITTER ROOT VALLEY FRUIT EXHIBITION.

Root farm at Hamilton, owned by Marcus Daly, alone has 70,000 fruit trees, many of which are now bearing. Competent judges state that the best apples in the United States are produced here. It was a Bitter Root apple that won the second premium at the recent exposition at Omaha, and it certainly has no superior in size, flavor or keeping qualities. The growing of small fruits also attracts deserved attention at the hands of fruit growers. The strawberry, gooseberry, currant and raspberry are indigenous to the soil and yield abundantly. Hundreds of acres of strawberries are raised in the valley, and a ready market found for them. By means of irrigation the strawberry season is prolonged and from the middle of June until late in August this delightful fruit is found on the market. When the berries from the south and west, from the neighboring states of Utah, Oregon and Washington have long ceased to appear, the Bitter Root berries are still on the market, and the grower of these berries is without a competitor in the markets of the state.



THE BITTER ROOT VALLEY VEGETABLE EXHIBITION.

The resources of the valley will not long be confined exclusively to those connected with the cultivation of the soil. Valuable mineral deposits are being discovered, and the time is not far distant when this section of Mon-

tana will add her quota of precious metals to the wealth of the world. At the headquarters of the West Fork of the Bitter Root river is the Mineral Hill district, covering an area of fifty square miles, proved by competent authority to contain surface indications equal in mineral richness to anything known in the west. The whole district is covered with a series of true fissure veins thoroughly mineralized, and carrying gold, silver and copper. In this district but few locations have thus far been made, and but little development work has been done, owing principally to the fact that the district is more than a hundred miles from the railway, and heretofore it could be reached only by a difficult pack-trail. This difficulty has, however, been overcome by the construction recently of a wagon road, costing more than twenty thousand dollars, to the Monitor mine, which is being rapidly developed, and is showing an amount and richness of ore that is a surprise to its owners. Prospecting and development work will now progress rapidly in the district. A concentrator and other mining machinery will be put up, and hundreds of other wealth producing mines will be developed. Hughes creek, on the west fork of the Bitter Root river, also lies in a very rich placer region which is but partially developed. Several claims upon which considerable development work has been done in the past are now yielding as high as twenty dollars to the man per day, and the extent and richness of the district is increasing as the work of prospecting and developing is pushed forward. In the same district is a vast section of country underlaid with coal measures varying in thickness from five to twenty-five feet, and containing a good quality of lignite coal, which has been pronounced by experts to be very valuable, and which will be a source of great wealth to those so fortunate to possess claims there, as soon as railway transportation reaches it. On the west side of the river near Victor are the Pleasant View mining district and the Curlew mine, which, under fair prices for silver has paid rich dividends, and has a concentrator and much high priced machinery; the Whip-poor-will and Last Chance mines adjoin the Curlew and give promise of equal richness. On the east side of the river in the main range of the Rocky mountains on Claremont creek is an extensive system of copper bearing ledges, and placer locations have been made and profitably worked on Burnt Fork and Three Mile creeks, while the White Cloud mine on Eight Mile creek has an expensive concentrator, and has been worked for several years.

The immense tracts of timber covering the mountain sides and lining the numerous streams breaking through the mountain wall on either side of the valley at the present time support one of the chief industries of the valley, and a large amount of capital has been invested in it. The lumber business here furnishes employment for about five hundred men the year round, and creates the largest pay-roll of any business in the valley.

LIBRARY
OF THE
UNIVERSITY of ILLINOIS.



Assessed Valuations.

Real, \$4,507,964; personal, \$1,541,065; railroads, \$493,715; total, \$6,542,740.

Gallatin County.

One of the Richest Agricultural Counties of the State, Reaping a Rich Reward Each Year as a Return for the Investment of Labor on the Farm and the Range.

Journeying westward from St. Paul on the Northern Pacific railway the first mountains that are encountered by the railway grade is the Gallatin range, which is the dividing line between Park and Gallatin counties.

Laboriously the west coast limited train, drawn by one Mogul engine and propelled by a second, makes its way up the eastern slope for a distance of 15 miles, through some of the most beautiful mountain scenery in a state noted for the majesty of its peaks and ranges.

Well nigh to the summit of the Muir (sometimes called Bozeman) tunnel is reached and passed. This tunnel, nearly a mile in length, lined throughout its entirety with brick laid in cement, is a grand tribute to engineering skill, cutting off, as it does, nearly three miles of the heaviest grades on the Northern Pacific railway. Once the tunnel is passed, the second engine is dropped, and the train speeds on its way, dropping nearly 1,000 feet in the first eight miles from the mouth of the tunnel.

The canyon traversed is known as Rocky canyon, and well known it is truly, so narrow and precipitous is the canyon, that when the railway was granted the right-of-way through this canyon it was necessary to use the public highway for its roadbed, and to blast out and excavate a new highway along rocky ledges and narrow shelves, far above the original site. On either side of the train views are to be had of scenery of the wildest and most picturesque character imaginable.

At the mouth of the canyon the railway passes through old Fort Ellis, where barely two decades ago were stationed in the interests of peace and harmony, four companies of United States troops, whose hands were full in repressing the raids and outbreaks of the hostile Sioux, who, by the right of possession, owned the valley of the Yellowstone. As one passes Fort Ellis, far to the northwestward, 50 miles as the crow flies, is to be seen the Tobacco Root range of mountains, while to the northward, and farther still, are to be outlined the Boulder mountains. Swinging to the right a little the Bridger mountains, the Eastern boundary of the county, are seen and skirted, while to the north the Horseshoe Hills fill the gap intervening between the Bridger and Big Belt mountains. Never did so beautiful a valley have such wondrous setting as is given to this exquisite dimple on nature's face by the encircling and protecting ranges.

Nerve-racked by the unceasing winds of Minnesota and Dakota, with the eye wearied by the glare of the sage brush plains of Eastern Montana, one drops down (or upward) into a green oasis, hedged about by lofty mountain ranges, whose sides are clad with the greenery of the abundant conifers; the vast plain (if in the summer) is like a mighty checker-board of color, the varying shades of green and golden, being the composite effects of the fields of wheat, barley, oats, the meadows of clover, alfalfa, timothy and red top encircling the valley, or the boundless and endless fields of winter wheat and



A RANCH COTTAGE.

rye, literally a golden setting for the emerald low lands beautiful in the dress of spring crops.

Threading this beautiful Titanic garden are streams, clear, cold and pure, leading out of every mountain canyon and valley at intervals of a mile or two apart, nearly a hundred in number, all heading for a common center, the three forks of the Missouri. Each and every one of these en route is made to pay tribute to the husbandman, and does its full share to increase the natural productivity of the soil.

Over and over again is this water used, first diverted to the soil at or near its exit from the mountains, it quickly finds its way (much of it, likely a third) by subterranean passages, back into the original stream bed, to be again carried out in ditches into other fields and meadows, and again comes a resurrection and added life to its vegetation.

A holy union is that of land and water, blessing and fructifying the world as it does, especially if the control is in the hands of a son of old Gallatin, all

of whom are accomplished irrigators, with a maximum temperature of 93 degrees in the height of summer, with an abundance of water, and soil as highly charged with nitrogen, phosphoric acid and potash as this is, we have every requisite for ample and abundant production.

Proximity to the mountains compels ample moisture precipitation for grain germination, clear skies through the growth period, and equable temperature guarantees freedom from blight. Damp soil from irrigation is death to the chinch bug, hessian fly and the grasshopper, and natural richness and fertility promote such a growth of fibre and fruit as renders Gallatin county yields the wonder of the civilized world. California boasts of its wheat lands (with an average production of 15 bushels), Iowa of its corn fields, Connecticut claims distinction as a producer of tobacco rare in quality, Arkansas is the home of the big red apple, and Missouri's best crop are the energetic boys and girls who, emigrating to Montana, have helped to make Gallatin famous by their intelligent, faithful labor. Gallatin has no specialty. Every good thing in agricultural production becomes the better for association with her sun-kissed, brook-bedewed fields.

Wheat, oats, barley, winter rye, field peas, vegetables, potatoes, sugar beets, carrots, sweet corn, flint corn, clover, alfalfa, timothy, blue joint, red top, blue grass, swine, sheep, cattle, poultry and boys and girls are here bred that are beyond compare.

Given twelve months notice, and with no help from any other county of Montana, Gallatin will gladly undertake to feed a population double in number that now to be found in Montana. Nor is the Gallatin farmer distressed at the prospects of depleted fertility of soil.

The experiment of the station under the efficient management of its first director, devoted seven years quite largely to promoting the culture of the legumes, clover, alfalfa and field peas. So thoroughly was this propaganda conducted that the acreage of legumes now growing far outstrips that of any other one crop.

There is scarcely an acre in Gallatin susceptible of being plowed that is not ideal clover land. There is no waiting for the slow process of nitrification of the soil (clover germ deposition). When these fat lands were made, they were clover lands, ab initio, from the beginning.

That clover in Gallatin county will beget grain is fully proven in the behavior of barley for three successive years following clover of a single current season's growth. (about 125 days). First year, 63 bushels; second year, 83 bushels; third year, 84 bushels of first-class number one barley. This being the sole means used to fertilize the soil. Fields of oats have yielded 129 bushels per acre, machine measure; by weight this would have been increased fully 15 per cent. Wheat occasionally turns out 60 bushels per acre.

The valley is studded with flourishing villages and towns. Chestnut, Bozeman, Belgrade, Central Park, Manhattan, Logan, Willow and Three Forks Creek are railway points, while in the interior are Salesville, Duncan and Baker.

The Northern Pacific railway runs every day in the year four daily trains over its main line, and a good service over its branches to Trail Creek. The



A GALLATIN COUNTY CABBAGE.

northern and northwestern boundaries of the valley proper are traversed by the main line, and the liberal policy of this railway affords ample facility for the transaction of business to the farmer and merchant.

The gross earnings of the Northern Pacific railway for the freight and passenger traffic of Gallatin county is very close to a million dollars annually. There is a steady and satisfactory increase in the volume of business year by year, and the railway manifests appreciation by constant improvement in service and substantial reduction in tariffs.

Bozeman, the county seat, is a thriving town of 5,000 population. Two banks carry almost a million (\$1,000,000) in deposits, two flour mills having a manufacturing capacity of 500 barrels daily are run to full capacity, a model brewery manufactures beer equaled only by Milwaukee's best from the choicest of barley. Churches, clubs, secret orders, schools, the state college and station, offer all the advantages of civilization.

Belgrade does a thriving machinery, mercantile and grain storage business. Manhattan is a fine business point. Here are located the malting plant of the Montana Malting company, the paper mill of the Montana Paper and Pulp company, two hotels, a fine graded school, stores, etc. This thriving village is surrounded by the lands of the Manhattan Malting company, now offered for sale for the first time, on most desirable terms.

Heretofore the farms of Gallatin county have been too large (averaging 330 acres) to make ideal communities. The burden of taxation has fallen upon a comparative few in numbers, and a sparse rural population has not afforded the field for that full mercantile development that is always associated with large bodies of fertile lands.

Following the example of the Manhattan Malting company (the largest individual holders of land in the county), other large holdings will doubtless be put on the market, and the result be, to the decided advantage of the county and state. Unquestionably Gallatin county in the past 30 years' record of crops has established her well earned right to being the heaviest continuous producer of No. 1 grain on the western continent, and is now prepared to enter the list against the world in successful crop diversification. Much is needed in the line of capital and muscle.

Promising fields that are especially inviting are along dairy and creamery lines. Rich and nutritious grasses, cereals trebling and quadrupling that of the United States at large, pure, cold water in abundant supply, healthful climatic conditions and a market ready made for the product, are factors worthy of the consideration of those in other sections interested in such propositions.

Meat products, notably of swine, can be most successfully created in Gallatin county. Fairly satisfactory results have been achieved by farmers who have produced pork for the Butte market solely and wholly on alfalfa. Unquestioned records show a gross cost of pork production to have been 2 cents per pound in Gallatin county, leaving a respectable margin between this and the selling price at any time in the past ten years. To the eastern and southern farmer and stockman contemplating a change of base, it will be an attractive statement that hog cholera, the curse of the western swine grower, is unknown in Gallatin county. At long intervals swine have been known to die



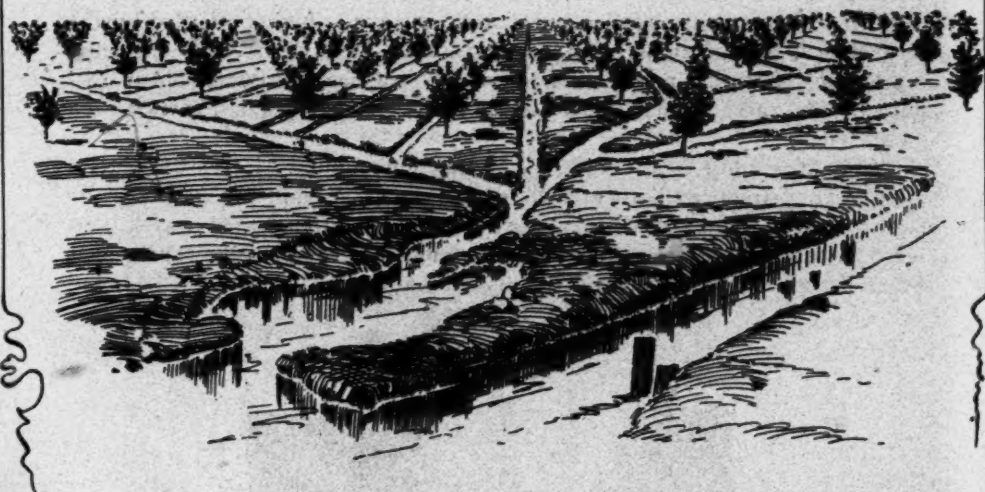
GALLATIN COUNTY WHEAT.

of cholera in this county, but such have always on investigation been found to have been exposed to the disease prior to shipment. We have never known the disease to have been transferred from imported to domestic swine.

Poultry is another sure means of profit, fowls of all kinds succeeding remarkably well.

Fruit culture is being successfully conducted along all the foothills bordering the county. The county is certain to become a large exporter of winter apples, once the available orchard lands are set to hardy and desirable varieties.

The Gallatin strawberry has made itself well known in the state markets,



A YOUNG ORCHARD IRRIGATED.

coming in, as it does, after the usual run of early berries, and by its lateness purchasing perfect immunity from the bete noir of berry growers the United States over, the late spring frosts, it is a most welcome visitor to the table of all who love this luscious fruit.

Considering all things conducive to longevity and prosperity, there can be no section of the United States that offers so much to one anxious for a home as is to be found in Gallatin county.

Educational advantages are of the best. So perfect is the public school system of the county that a graduate therefrom has a liberal education. Nearly every evangelical denomination of religion is to be found within her borders. A climate approaching perfection between the months of May and December. The winter months abound in clear, balmy, sunshiny days, with barely sufficient snow fall to afford summer moisture. Building material cheap and abundant, as is the fuel supply.

Consumption and its first cousin, catarrh, are practically unknown, low, wasting fevers are never here contracted, while malaria and asthma have no opportunity to exist in an altitude similar to that of the county.

The most ardent sportsman can gratify his highest longings for game within the boundaries of the county. Bear, mountain lions, wild cats, elk, mountain sheep, deer, fox, coyote, timber wolf, beaver, musk rat, blue grouse, ruffed grouse, sharp tail grouse, fool hens in season, ducks, geese, swan, cranes,, all are to be found in fair supply. The careful, able sportsman never makes a water haul.

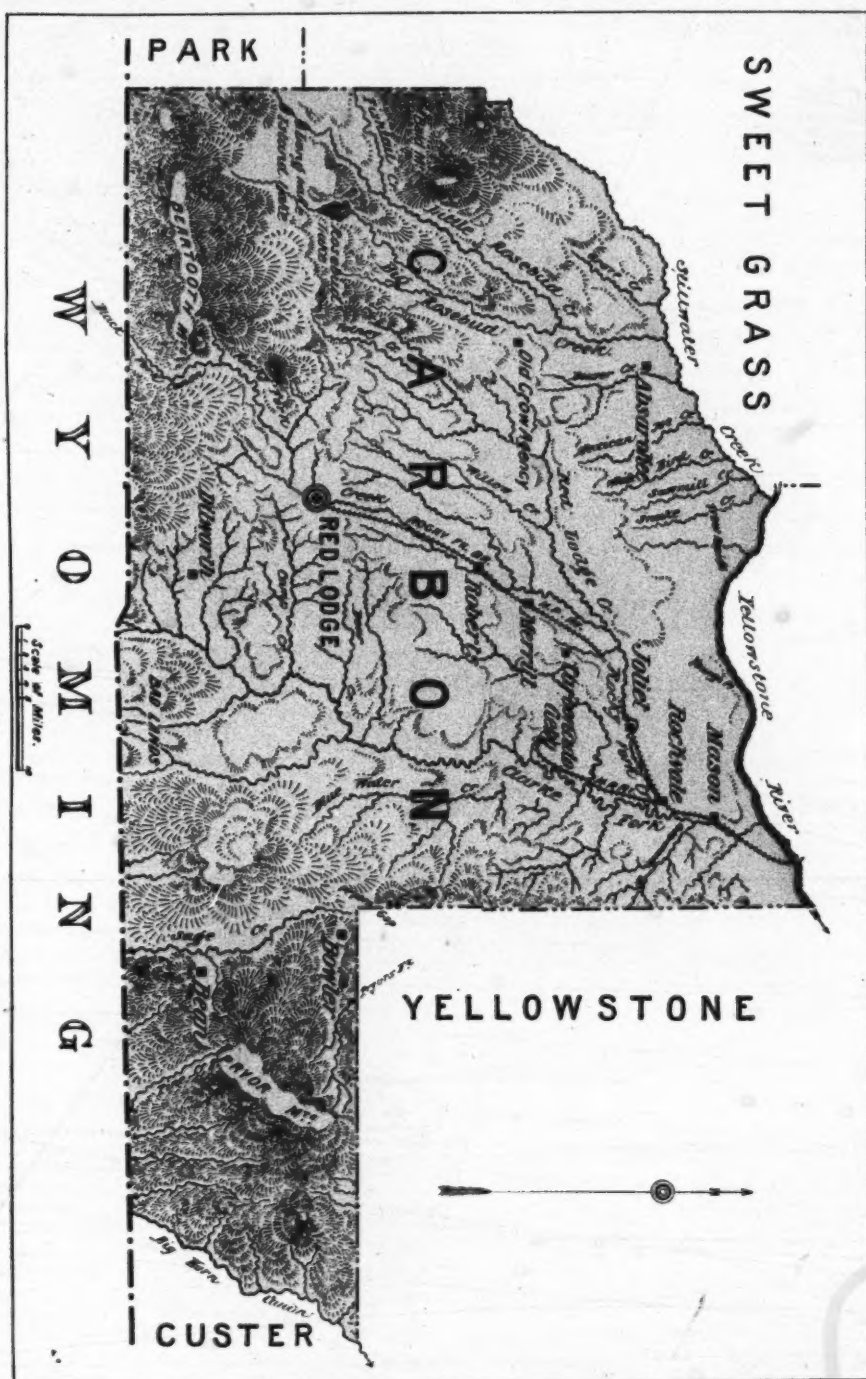
The streams abound in the choicest of game fish, three species of trout, the grayling (a fish that made the waters of Michigan famous, but that are practically extinct there at the present time), the white fish, these are the leading numbers of the finny tribe in Gallatin county. The legitimate joy of sporting is here increased many fold in its pursuit. The sportsman is not called on to travel dreary wastes of desert, nor to thread inextricable, impassible thickets, nor to traverse dangerous swamps. He is free of the dangers, troubles and numerous reptiles and insects, and the stimulus afforded by the rarified air is like a draught of strong waters upon the system. Again, the keeping quality of fur, fin and feather is greatly prolonged and extended in this pure air, and there is small excuse to the hunter for being found with tainted game or fish.

Gallatin county is an English speaking community. Its early settlers were usually American born, and there has been no attempt to transplant foreign colonies on to its territory. The few who have found their way hitherward have been speedily assimilated with English speaking folk. There need be no better county in the land than is old Gallatin.



SLEEPING CHILD SPRINGS.

LIBRARY
OF THE
UNIVERSITY of ILLINOIS.



Assessed Valuations.

Real, \$970,529; personal, \$1,411,371; railroads, \$292,741; total, \$2,674,641.

Carbon County and its Great Resources. 3 3 3

**Coal and Mineral are Added to the Agricultural Resources, and Combine to
Make This One of the Richest and Most Prosperous Counties in the State.**

Carbon county was created in 1895, and has an area of 3,000 square miles, and is assessed for \$2,674,641, divided into, realty, \$970,529; personal property, \$1,411,371; railways, \$292,741. The population is 7,533, of which more than 1,500 are miners engaged in the development and working of the coal and quartz mines of the county. The industrial resources of the county are mining, farming and stock raising. The principal valleys are the Yellowstone, Clark's Fork, Stillwater, Rocky Fork, Rosebud and tributaries. All lands require irrigation for cultivation. There are 44 miles of the Rocky Fork and Cooke City branch of the Northern Pacific railway in the county. The facilities for combined farming and stock raising are unusually good.

Red Lodge, the county seat, is located on the Rocky Fork river at the base of the mountains, and is the terminal of the railroad and a shipping point of some considerable importance, being the outlet for the sheep and cattle ranges of a part of Northern Wyoming. It has a population of 1,500, with good school.

Not in all the broad domain of the "Treasure State of Montana" are the natural resources more fittingly adapted for the agriculturist or stock grower than are those within the boundaries of Carbon county. The numerous small streams flowing down its fertile valleys furnish an abundant supply of water for irrigation not surpassed by any other agricultural section of the state. Along Rock creek the stream makes a descent of about 100 feet to the mile, and the numerous irrigation ditches along its course attest the fact that nearly all the bench lands stretching for several miles back from each side of the Rock Creek valley proper can be brought under cultivation and made to produce wonderful crops with but little labor. The Clark's Fork and Stillwater rivers, with their tributaries, do not fall quite as rapidly as Rock creek; yet inexpensive irrigating ditches and canals are met with on every hand, and much of the rich soil of these valleys is being brought to a high state of cultivation. Statistics have shown that the most populous and prosperous regions of the earth are those in which irrigation is practiced. The natural advantages of Carbon county in this respect will show that she is destined at no distant day to have no superior in the state. In Carbon county the yield

within the state much more than equals the supply, the producer of these staples does not have to pay large transportation charges to get his product to a market. In years past the hills and valleys of what now comprises the county of Carbon were monopolized by large herds of cattle and sheep, but since the valleys have been settled upon, and the streams fenced in to a large extent, the great herds have been reduced, until now the stock is almost entirely owned by the smaller holders and ranchmen. The hills and grazing lands back from the streams will always afford plenty of pasture lands for small herds of stock, and the rapid development of the coal mining industry provides a ready home market for products of both farm and range. Alfalfa, staple fodder for cattle, sheep or hogs is being raised by nearly every ranchman in the county. The yield for a season is from three to five tons to the acre. Barley, equal in every respect to the noted product of the Gallatin valley, is grown here, and finds a ready sale in the eastern states, to be used for malting purposes. Oats yield from 60 to 80 bushels per acre, and bring from 75 cents to \$1.25 per hundred pounds. Corn, vegetables and small fruits all grow splendidly in any of the valleys, and command good prices.

However much Carbon county may be blessed with agricultural and stock growing resources, the fact must not be lost sight of that her coal mining industry is one of the chief institutions of the state. Outside of the high mountains in the southwest corner, the entire county is underlaid with measures of semi-bituminous coal. At Red Lodge, on the Rocky Fork, mines have been operated extensively since 1889, and the coal is being used on railroads, in smelters, mills and for domestic purposes from the Missouri river at Mandan, North Dakota, to the Washington state line. These mines employ from 300 to 500 men, and indirectly support as many more. At Carbonado, about 20 miles northeast of Red Lodge, the Anaconda Copper Mining company is erecting a coal mining plant that will be the equal of any in the west. This company will use the coal at their smelters at Anaconda, and will employ in the coal mines from 1,000 to 2,000 men. At Bridger, the coal measures have been developed and a mining plant erected by Butte mine owners and others which will soon be shipping from 150,000 to 250,000 tons of coal a year. At Gebo a company has been at work putting in a coal mining plant that will have an equal capacity. A railroad to these two points has just been completed, and the mines will soon be in active operation. Other smaller companies are operating coal mines within the county, and it is safe to estimate that from 5,000 to 10,000 men will eventually be employed in Carbon county in this single industry. South and west of the railroad shipping points of Carbon county are the quartz mining districts of Sunlight, Wood River, Stinking Water, Grey Bull and New World. From the former district rich silver and copper ores are being mined and freighted to Red Lodge for shipment to smelters. In the Wood River district arrangements are being made by one of the mine owners for keeping 30 freighting teams at work hauling ore from one of the mines during the coming year. In the New World district a ten-stamp mill and concentrator is in successful operation. At no distant day smelters will be constructed in the vicinity of the coal measures, and these ores will then be treated without incurring the expense of trans-

portation charges. Near the headwaters of Butcher's creek, about 15 miles west of Red Lodge, are petroleum fields, where crude petroleum oozes out of the sandstone. During the past fall a diamond drill was operated here, and at a depth of 250 feet a fine quality of oil was reached, which rose up over 40 feet in the well. A larger drill has been ordered for permanent use here, and soon another great industry will be added to Carbon county's wealth. Along the base of the Bear Tooth range of mountains, in the southwestern corner of the county, are immense reefs of the finest quality of limestone, from which a great deal of lime has been manufactured, and is being used almost exclusively in the towns of Southeastern Montana. Along the Clark's Fork river placer gold has been mined for a number of years past. The gravel bars along the river yield on an average 30 cents to the cubic yard. Miners and teams and scrapers have been making fair wages mining this gold for several seasons. Near the town of Bridger a plaster of paris mill has been operated for several years past, and the product shipped to all parts of the state. The quality of the cement is of the best, and the gypsum deposit, from which it is manufactured, is practically inexhaustible. Iron ore also abounds in the mountains, and will become valuable for smelting and manufacturing purposes. Immense sulphur deposits and mountains of the purest marble are situated on some of the tributary streams of Clark's Fork river.

Carbon county is now one of the largest coal producers in the state, and as much of the coal is suitable for the purpose, the production of a fine quality of coke has become an important industry. Beside the smaller concerns, there are three large operators that produce thousands of tons of coal per day—the Bridger Coal company, Rocky Fork Coal company and the Gebo Coal company, all of which are operating to about the same extent.

The coal mines and town of Gebo are located in a gulch to the west of Clark's Fork river. The town was named after its founder, who also developed the mines, and whose persistent energy has brought the industry up to its present magnitude. While Gebo is now called a coal camp, it is destined to be a substantial and prosperous city. Besides the support of the great mines, it has the support of an agricultural valley that cannot be surpassed anywhere for richness, and is occupied by thrifty and prosperous farmers, while the surrounding hills furnish an excellent range for cattle and sheep. The town is the natural trading place for all these ranchers and stockmen, and its commercial importance is astonishing for the size of the place. The ranchers and stockmen of Northern Wyoming are also beginning to trade there. With the thickly settled valley of prosperous farmers, working irrigated lands, where the crops never fail; with a range country in the immediate vicinity covered with thousands of head of cattle and sheep; with a coal mine which, when it reaches its maximum capacity will employ 1,000 men, the prospects for the future of Gebo are indeed bright. And there is the possibility, also, that it will be a smelting point for the rich ores of the mineral district lying to the south of the town. When a railroad reaches them, which is only a matter of a short time, it will be natural to haul the ore down hill to a smelting coal which cannot be surpassed in the state. It takes several tons of coal to treat a ton of ore, and when the mines of the Sunlight basin,

the Stinking Water and Cooke City are developed, their immense output of ore will be directly tributary to a town on the Clark's Fork for treatment.

Most of the business houses of Gebo are constructed of brick or stone, a splendid quality of the latter being available right on the townsite, while Gebo can boast of several residences which cost from \$1,000 to \$3,000. No town of its size in the state, in fact, has a better class of buildings, and for a coal camp, their character is unprecedented.

Farm lands can be obtained in the vicinity of Gebo for a merely nominal figure. Six years ago this country was all a part of the Crow Indian reservation, which was thrown open to settlement in the spring of 1893, and became public domain. The government land is not yet all taken, which is subject to entry as homesteads, the settler being required to pay \$1.25 per acre therefor. A number of the best homesteads near the town are held by Indians as Allotments, and 160 acres can be purchased from them for a few hundred dollars. Fully one hundred of these have been secured within a few miles of Gebo during the past year or so. And there is water enough in the Clark's Fork to irrigate every acre of tillable land in the valley. Ditches can be taken out at a minimum cost, the ranchers now having thousands of acres under ditches that they have built themselves, their only expense being the use of their teams.

Red Lodge, the county seat of Carbon county, is a thriving, bustling little city of something less than 2,500 people, and has an assured and brilliant future before it. The town is situated at the terminus of the Rocky Fork and Cooke City branch of the Northern Pacific railway, and is a substantially and modernly built little city. It has stone and brick business buildings, schools and churches and handsome residences. It has a weekly newspaper—The Picket—one of the brightest and typographically neatest local exponents of the state. Of the causes for the prosperity of the city, this authority says: Nestled at the head of the most fertile valley within the state, surrounded upon every hand by rich treasures of agricultural and mineral wealth, and unbounded opportunities for stock raising, Red Lodge sits as the mistress of a vast territory of wonderful resources. In her lap is poured with a prodigality that knows no ending the enormous output of this section. The farmer naturally seeks Red Lodge to find a market for his produce; the stockman gravitates this way as naturally as the water courses flow to the sea; while the coal miner finds this city to be his abiding habitat. But the coal miner prosecutes his search for mineral treasures not alone. His brother in the Big Horn Basin country and in the Cooke City district vie with each other in developing and opening up gold and silver lead mines, and their development means yearly a large expenditure for machinery and material, and the major portion of this trade comes to Red Lodge. All of these circumstances contribute their full quota to the advancement and upbuilding of this fair city, but probably no one industry is of so much importance as that controlled by the Rocky Fork Coal company. That company has a monthly pay-roll amounting to \$30,000. Every thirty days it distributes this sum among its 450 employes, who reside in Red Lodge, many of whom are married and support families. This industry may be called the mainstay of Red Lodge. As

a village, its birth was due to the establishment of this industry, and its growing greatness as a city has been fostered and encouraged by the constant working of the Rocky Fork coal mines. Daily shipping some sixty carloads of coal, the major portion of which is used by the Northern Pacific railroad, it can readily be seen that the coal mining industry of Red Lodge plays a very important and transcendent part in the continued growth and development of this city.

"The list of building improvements which have either been made in Red Lodge or are now under construction, tells eloquently of the progress that is being made by this city, and is a reliable and trustworthy index of the city's constant growth and continued development."

There is no county in the state that offers safer or more diversified opportunities for the investment of capital or the employment of energy than Carbon county.



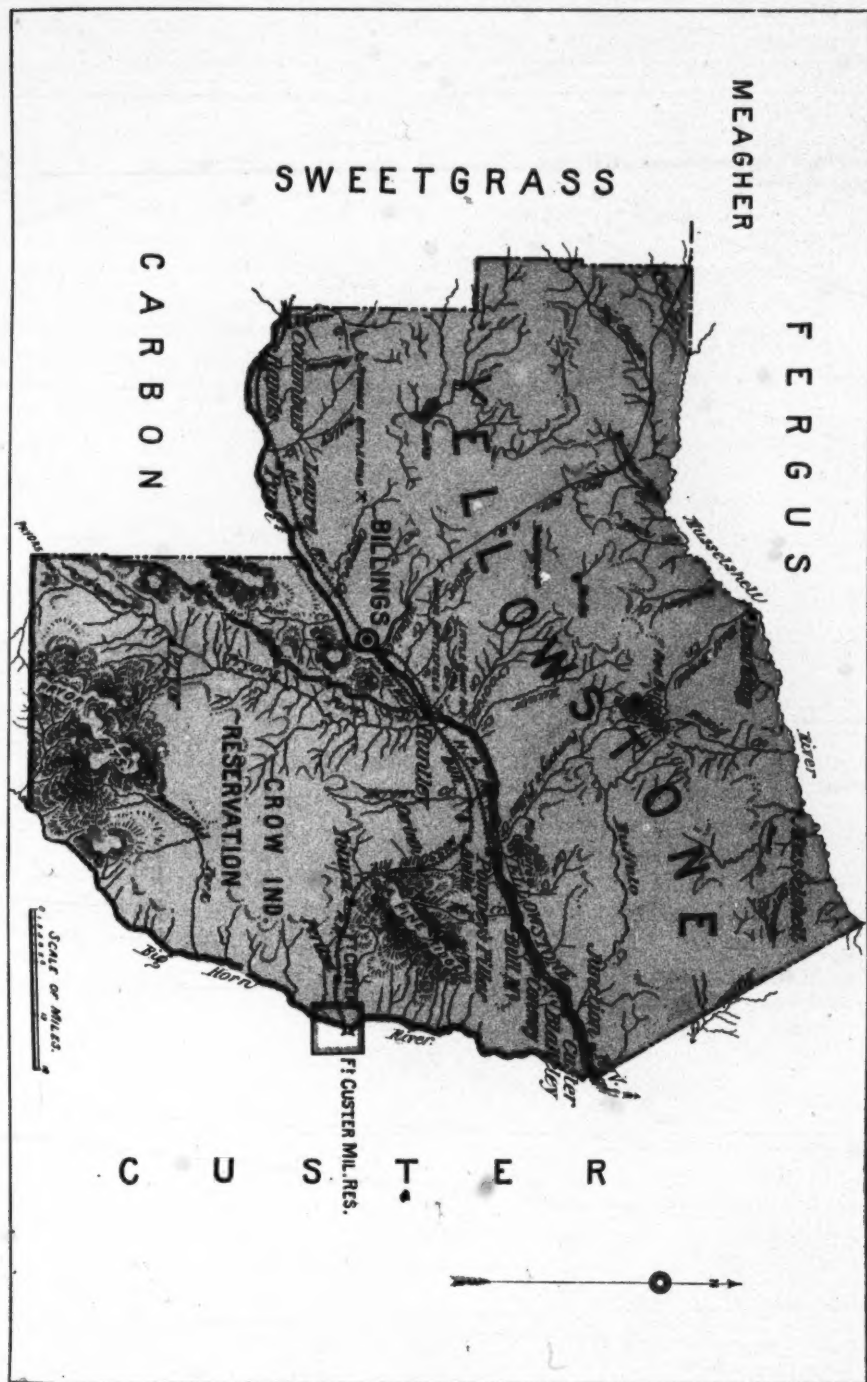
SHEEP NOONING.

Yellowstone County and The City of Billings.

One of the Best Agricultural and Stock Raising Counties in the State—Its Development Rapid and Extended, and Its Future Growth Assured—Billings, the County Seat, One of the Liveliest and Best of Our Growing Cities.

Billings, the county seat of Yellowstone, one of the richest agricultural counties of the state, has had a steady growth ever since the town was laid out. This is due to the fact that it does not depend upon a single industry for support. It is a commercial town, drawing trade from a scope of country that extends 150 miles on the north, the same distance on the south, and fully seventy-five miles on the east and west. This vast territory is as fine a stock and agricultural country as can be found anywhere in the United States. It is covered with herds of cattle and flocks of sheep, while the numerous valleys between the valleys are dotted with irrigated farms, the soil being as rich as that of the historic valley of the Nile. Thus Billings draws her sustenance from the great stock industry and her splendid agricultural resources, neither of which ever fail. Crop failures are unknown in an irrigated country, while the snows and rains are sufficient to insure abundant feed on the ranges for live stock.

Under such favorable conditions it is no wonder that a modern city has been built on the north bank of the Yellowstone, and, taking the past five years as a criterion, it is a conservative estimate that the city will again double its population in the same period of time, when it will boast of 8,000 inhabitants. Already Billings contains the improvements and advantages usually to be found in cities of 25,000. She has a fine modern sewerage system, to begin with; a good waterworks and electric light plant; telephone exchange, reaching out into the surrounding country; a fire department that would be the pride of any city; an elegant modern opera house, two fine clubs, scores of handsome homes, big business blocks, well-graded streets and two national banks that withstood the panic of '93, and met every demand made upon them. These are a few of the material advantages possessed by Billings. In addition to them, her intellectual and spiritual welfare have not been forgotten. A fine free public library, sustained at public expense, three public school buildings, and a fine high school edifice, two excellent newspapers and four churches, while the Sisters of Charity maintain an up-to-date hospital in its own home, costing \$30,000.



Assessed Valuations.

Real, \$2,342,544; personal, \$2,053,625; railroads, \$782,519; total, \$5,178,688.

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This is a brief review of the public improvements in Billings. The city is built in the fertile valley of the Yellowstone, and was named for the late Hon. Frederick Billings, of New York, at one time president of the Northern Pacific railroad. That great transcontinental line passes through the town, which is 892 miles from St. Paul, 238 from Helena and 1,164 from Portland. The Burlington & Missouri River railroad also reaches this point with its Wyoming branch. Billings was laid out in March, 1882. It has an elevation of 3,112 feet, a climate unsurpassed in healthfulness, and as enterprising a people as can be found anywhere in the universe. In the manufacturing line it has a 150-barrel flour mill and a modern brewery with an annual capacity of ten thousand barrels, and a number of lesser, but entirely successful industrial institutions.

There are splendid openings here for a large woolen mill, a canning factory, pork-packing plant, and other manufacturing plants of a similar character, while the establishment of smelters to handle the ore of the mines now being developed to the south of the city, is by no means a remote probability. The cheap coal that can be secured by rail from the neighboring county of Carbon encourages this belief.

The commercial interests of the city, as already indicated in this article, are larger than those of most cities of several times the size of Billings. An idea of them may be had from the fact that a single firm pays railroad freights aggregating \$40,000 annually, while several others pay two-thirds and half that amount. It is the large stock and agricultural interests, of course, which give Billings such prominence in a commercial sense. The large cattle and sheep outfits, when they purchase supplies, come in with freight teams that haul almost as much as a railroad train. Their trade is worth a vast sum to the city, it not being an uncommon thing for single purchases by the stockmen to run into two or three thousand dollars. Such a large volume of business is going to make a wholesale town of Billings. One exclusive wholesale grocery is already established here, while several of the big retail establishments constantly keep men on the road to look after their out-of-town orders. The city, in fact, is already largely engaged in the wholesale trade, which is increasing with a rapidity which can be attested by the commercial travelers; they sell more goods here, they say, than in any other city in the state, with the exception of Butte. But Billings must be seen to be appreciated. With its wide, well-graded streets, its shade trees and comfortable homes, its neat railroad parks facing the principal business street, its largest suburban park, fair grounds and other public improvements, Billings is a desirable place to live. And its commercial and industrial activity also make it a profitable residence point. Taken with a healthful climate, with more sunshine than any other section of the United States can boast, what more can be desired? Billings is a beautiful little city, and it is the home not only of thrift and enterprise, but of culture and intellectuality as well; Billings contains only the minimum number of the rough, rowdy element so common to most western cities. There is no place here for men of that character. There are places here, however, for mechanics and honest workingmen; for business men of small or large means; for professional men, and for people retired from busi-

ness, who desire to spend the remainder of their days in rest and comfort. But the superior advantages offered to new comers lie in the agricultural resources of the fertile valley in which the city is built. They cannot be surpassed anywhere in the world.

In connection with the stock industry, they have made Billings what she is today; with the changed conditions, consequent with the curtailment of the ranges, they will be responsible for her future, which they have assured beyond a doubt. They have and will continue to attract other pursuits and industries, until, when every farmer is a stockman, and every stockman an independent capitalist, the population will be so increased that manufacturing will be a necessity. That is all that is needed now to make Billings a city of 10,000 or 15,000, and natural conditions will provide what is lacking in this direction. The city is growing so rapidly that capital is sure to seek investment here in manufacturing and its rich tributary country.

The assessed acreage of the county is 825,101 acres, and the realty assessment, \$2,342,544, the personal \$2,053,625, the railways \$782,519, making a total valuation for taxation of \$5,178,688.

The county derives its name from the Yellowstone river, which flows through it. It is essentially an agricultural and stock growing county, having no mineral resources. The agricultural areas are fertile, and a large proportion has been irrigated and is very productive. It is estimated that 100 square miles have been irrigated, and that there are several times that area that may be. The elevations of the valleys range from 2,500 to 3,500 feet, and the soil varies from a sandy loam to "gumbo," and from a few inches to forty feet in depth. The soil requires irrigation to insure profitable cultivation. Corn and all grains, grasses, vegetables and root crops yield abundantly. Alfalfa is one of the most profitable crops grown in this valley. Three crops are cut in one season, and yield from four to six tons per acre. Oats run from 59 to 125 bushels per acre, wheat 35 to 40 bushels, and other grains in proportion. Barley culture will soon be extensively pursued, the larger part sold for malting. Flax is also grown successfully, and farmers are encouraged to make it a staple crop. Potatoes attain an unsurpassed perfection. Small fruits are grown in all the valleys, and yield largely. Their culture has paid well, and the farmers are every year devoting more attention to their production. The experiments in the growing of apples, grapes, plums and cherries proving successful, many orchards are being planted, promising to make Yellowstone one of the fruit counties of the state. Strawberries attain a size and flavor unsurpassed. The rapidity with which vegetation responds to the genial influences of warmth and moisture is marvelous, and the productiveness of the soil excites the wonder of those unaccustomed to farming operations under the influences of irrigation.

The irrigation project that is being forwarded under the auspices of the State Arid Land Commission embraces 30,000 acres of as strong and productive land as can be found in the western country, or anywhere, for that matter, and this tract, when settled, will accommodate 180 families, which at five to the family, means the addition of one thousand people to the immediate patrons of our beautiful city, with both their purchases and sales, and the

addition of income they will bring to the county, without any appreciable increase of expense, will not be inconsiderable. To this addition to the patronage of Billings will come that of the Bridger district, the irrigation of which is now under way. This district embraces 15,000 acres, and will afford farm locations for ninety families and 500 people, and the locations are being made so rapidly, and with so much eagerness, that it has dispelled any idea that the lands would be slow in settling.

The greatest industry of the county has been stock raising. More than three-fourths of the county is grazing lands, and great bands of sheep and herds of cattle have grown and fattened on the ranges, and the resident owners have prospered. With the bringing of the lands under cultivation and irrigation, more attention will be given to combined farming and stock raising, the county now having 98 miles of irrigation ditches on the assessment roll, the total of which is \$4,480,052. Much attention has been paid in this county to the improvement of their stock by the cattle and sheepmen, and the more improved strains have been imported. The Burlington & Missouri River railroad enters the county from the south, having 47 miles of road in the county, with the terminus at Billings. The Northern Pacific crosses the county east and west, and has 101 miles of track in the county. The State Arid Land Commission has completed a survey for a large canal, intended to divert the waters of the Yellowstone to the bench lands east of Billings, which if accomplished will open rich and fertile lands that will furnish homes for thousands of people.

The climate of the Yellowstone valley, taken the year round, is as healthy as in any portion of the United States. The reports of the signal service observers show that this section of Montana enjoys more sunshine than any section of country in the world. Contagious diseases are unknown here, and in this valley the altitude is low enough, about 3,000 feet, not to have an unpleasant effect upon persons who have been accustomed to living at sea level. The winters are usually cold, but they rarely set in till Christmas, and it is more comfortable in this valley at 30 degrees below zero than in the eastern and middle states at a few degrees below freezing. It gets extremely warm during the summer, but the heat is not of that debilitating character, and, by reason of the altitude and close proximity to the mountains, the nights are always cool. The climate in the fall is delightful. The springs are short but not disagreeable, and, all things considered, a more pleasant place of residence cannot be found for a person enjoying fairly good health.

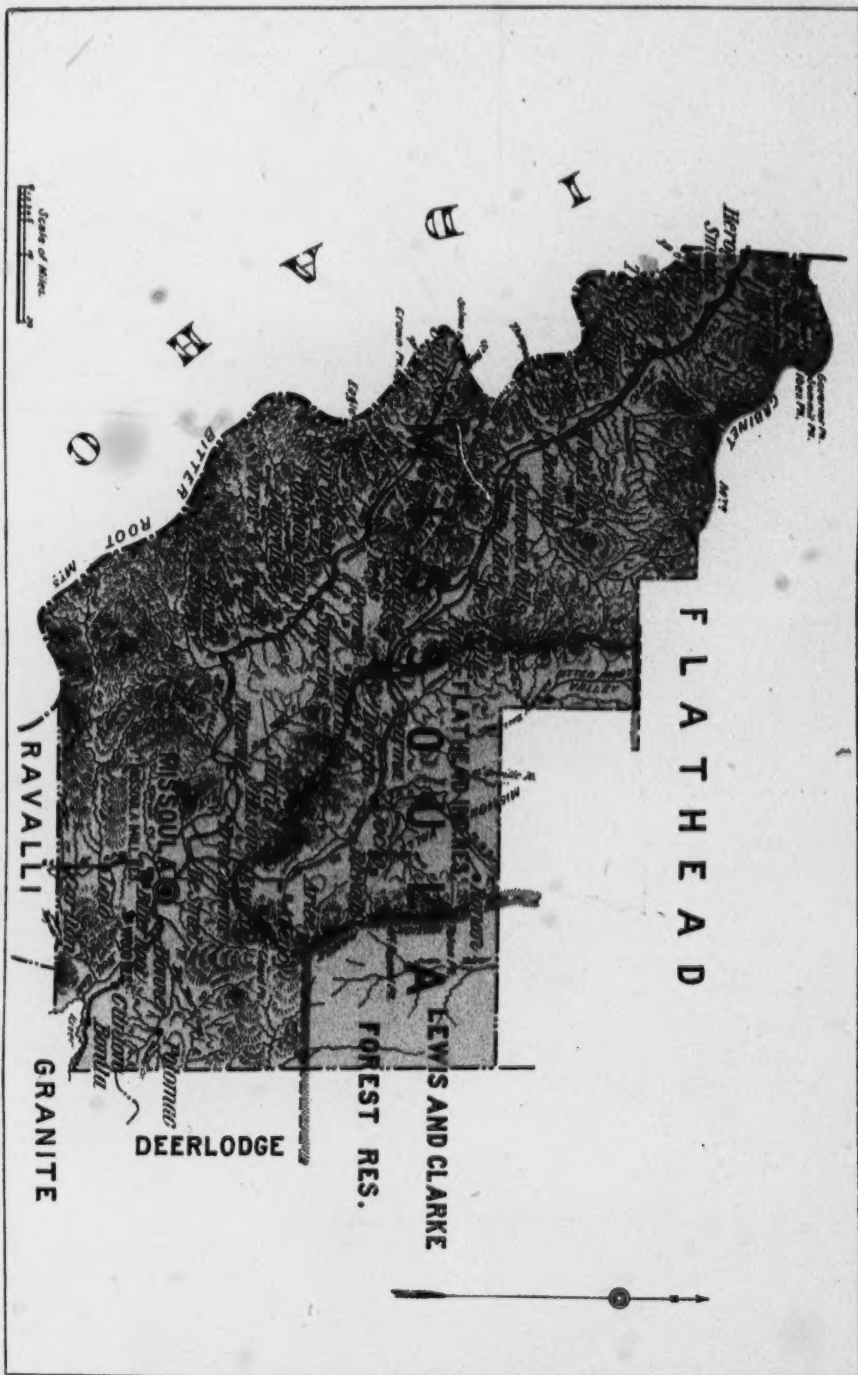
The principal town in the county besides Billings is Columbus, located forty miles west. The other towns, which are mere villages, are Park City and Laurel on the west, and Roundup and Musselshell Crossing on the north. To the south, separated by the Musselshell river, lies the Crow Indian reservation, a portion of which will soon be a part of this county. The principal streams in the county are the Yellowstone and Musselshell rivers. They are fed by numerous small tributaries, furnishing ample water to irrigate all the arid land in the county.

Missoula County.

Wealthy in Minerals, Timber and the Finest of Agricultural and Horticultural Lands—A Delightful Climate.

Missoula county, lying on the west side of the Rockies, has a population of 13,964, an area of 7,150 square miles, and is assessed for \$7,547,277, the realty assessment being \$3,828,223, personal property \$1,998,656, and railways \$1,720,398. The county is watered by the Missoula river, the Rattlesnake, the Blackfoot, the Bitter Root, and several minor streams. These unite to form Clark's Fork, which, with its tributaries, drains the entire western portion of the county. The ranges of mountains that determine the direction of the rivers are the Rockies, in the eastern part of the county, and the Bitter Root and the Coeur d'Alenes in the western part. Numerous peaks and elevations give tone and vigor to the landscape. Prominent among these are Lo Lo, Mount Jumbo, Point Lookout, Old Sentinel and University peak. Some very prominent elevations bear as yet no definite names. For the most part the mountain slopes are gentle and undulating; occasionally, however, they take a more rugged form. Sometimes these mountain sides are wooded to the very top, and again they are open, furnishing excellent pasturage the greater portion of the year. Along the various streams, and in many cases on the hill sides, will be found large areas of arable land. The abundance of streams, and the large flow of water in them, makes it possible to irrigate the land wherever it is necessary to do so for the production of crops of any kind.

The mineral wealth of Missoula county is very great. Lead, iron, silver and copper are especially abundant in the western part, while gold, silver and copper predominate in the eastern. Coal has been located at different points, but has not yet been mined very extensively. Granite, syenite, limestone are abundant, while building stone is very plentiful and of the very best and most durable varieties. Fire clay is found in considerable quantities, and in many cases the ordinary clay is well adapted for brick making. The timber is mostly pine, tamarack and fir, although cedar, spruce, cottonwood and other varieties are well distributed throughout the valleys and on the mountain ranges. The valleys of the Missoula, of the Bitter Root and of Clark's Fork afford a wide expanse of land for agricultural purposes. The Flathead Indian reservation, lying as it does principally on the slopes that border on Flathead lake and river, also affords a large and well watered tract of arable land. Missoula county is rich in minerals, ores and mines, but still richer in her agricultural and horticultural resources. While stock raising is carried



Assessed Valuations.

Real, \$3,828,223; personal, \$1,998,656; railroads, \$1,720,398; total, \$7,547,277.

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on to a considerable extent in some parts of the county, the greater amount of attention is paid to the production of oats, rye, barley, wheat, hay, vegetables and fruits. The Bitter Root, Lower Missoula and Clark's Fork valleys are especially adapted to wheat raising, and large quantities are annually produced. The mild and even climate of the valleys make them wonderfully productive in fruits, as well as cereals and vegetables. The apples, pears, grapes, plums, peaches, etc., of the Missoula and Bitter Root valleys are not excelled for beauty or for flavor. Small fruits, such as strawberries, blackberries, cherries, raspberries, currants and gooseberries, are abundant and of the best quality. Peaches are grown successfully in many localities. The strawberry is particularly excellent for its canning qualities, as it keeps its form and flavor when canned or preserved much better than when grown in many other places. The distribution of the railroads is such that excellent facilities are afforded for shipping, and as a result the fruit is shipped in great quantities to Helena, Butte, Anaconda and other markets.

The lumber business is one of the important interests of Missoula county. The principal lumber center is at Bonner, near the mouth of the Blackfoot river. Here are located the extensive mills of the Big Blackfoot Milling company. Other sawmills at different points furnish an abundance of lumber for building purposes. The tamarack is very much prized on account of the beautiful finish it takes, and on this account it is very much used for doors, cabinet work, wainscotting, etc.

Missoula county has an excellent system of public schools. They are well graded, and are managed by an intelligent and wide-awake class of teachers. The catholics have excellent parochial schools and also the Academy of the Sacred Heart, located in Missoula. The State University is at Missoula, and is growing rapidly in favor and influence. A good equipment has been provided, and excellent faculty selected, and full courses are in operation in the usual college and university lines of work.

Missoula, the county seat, is a city of some 4,329 people. It is located at the mouth of the Hell Gate canyon, where the Rattlesnake river enters the Missoula. The city has elegant brick blocks and all modern improvements. It is one of the best built cities in the west, and is noted for the absence of shacks and the inferior class of dwelling houses. Various enterprises give employment to a considerable number of people, and the city is growing rapidly. Missoula has the most beautiful location of any city in the state, and commands, commercially, the entire trade of Southwestern Montana. It has a United States land office, is the eastern terminus of the Coeur d'Alene branch of the Northern Pacific, and the northern terminus of the Bitter Root branch, which traverses the fertile valley of that name. The presence of the State University serves as an attraction to draw the better classes to Missoula for the purpose of enjoying the educational and social advantages offered. The comparatively low altitude, mild climate, pure water and abundant shade and fruits and flowers offer all the surroundings that so much contribute to pleasant homes. There is also in Missoula a strong religious sentiment that manifests itself in the many churches that adorn the city. Many of the prominent denominations are represented. The abundance

of field products of all kinds make living comparatively cheap, for the markets are supplied with fruits and vegetables of all kinds, all grown within easy radius of the city.

The seat of the Big Blackfoot Milling company's operations is located on the Missoula, at the mouth of the Big Blackfoot river. The milling company affords employment for a large number of people. There are good schools and an excellent hotel.

Plains is a flourishing town located west of Missoula, on the main line of the Northern Pacific railroad. It is a depot for an extensive agricultural region, where cereals of all kinds are grown in abundance. The wheat and rye produced in this locality are both excellent in quality, and abundant in quantity.

Thompson is noted for its lumber interests, and for its nearness to rich mines. It is a flourishing village and an extensive shipping point. A very remarkable phenomenon is found here. In sinking wells, just before the water is reached, or coming up through the water is a cold, colorless gas which keeps an even temperature the year round. Some of the merchants have piped this gas into their cellars, and thus have a perfect cold storage without expense.

Clinton, Bonita, Ravalli, Potomac, Frenchtown and other villages offer opportunities for trade and help to advance the commercial interests of the county.

Fort Missoula for several years has been garrisoned by companies from the Twenty-fifth United States infantry. The fort is beautifully located on the Bitter Root river, four miles from the city of Missoula.

For beautiful rivers and streams of pure, limpid waters, and for graceful mountain scenery, Missoula is unsurpassed. There may be found that which is more rugged, there may be deeper canyons and larger rivers, but for picturesque mountains and rivers, with bright sunlight over all, this county must always stand pre-eminent.



HAMILTON MILL AND DAM.

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Assessed Valuations.

Real, \$2,108,905; personal, \$3,352,567; total, \$5,358,874.

Granite County its Towns and Minerals.

**Philipsburg, the County Seat, the Center of a Distinctive Mining County—Its
Schools, Churches, Smelters and Mills—A Busy County With a Wealth
of Resources.**

Philipsburg, the county seat of Granite county, is essentially a mining center, as within its boundaries are some of the greatest silver mines of the world—the Granite, Hope and Bi-Metallic mines—and others which, while they are not operated on so large a scale, they produce very high grade ores. These mines, together with the mills with which they are equipped, furnish employment to 400 men, thereby creating a pay-roll sufficient to support a city of considerable size. This, however, is not the entire pay-roll, as there are other industries, such as the electric light works, Philipsburg Iron Works, lumber yards, brewery and other institutions that materially help to swell the total.

Philipsburg is the county seat of Granite county, and has a population placed at 2,000.

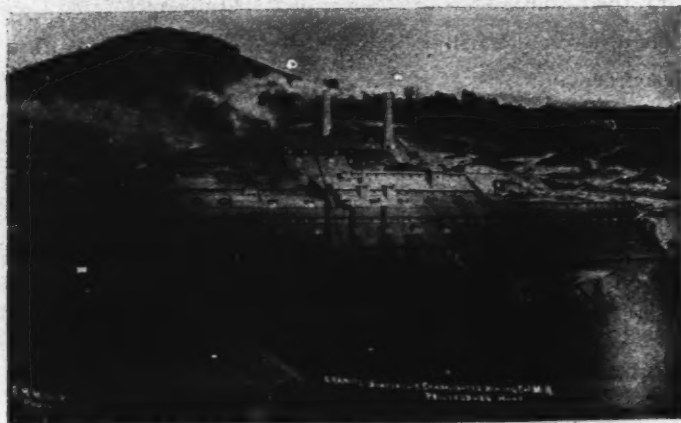
It has churches, schools, opera house, it is connected with the main line of the Northern Pacific by a branch line running from Drummond; it has a waterworks system, electric lights, good sidewalks, substantial business blocks, and in fact all of the modern improvements possessed by cities of greater population; it has all of the secret societies, literary and musical organizations—in short, the city is up-to-date in every particular.

One of the chief factors that have contributed to the past growth of Philipsburg and to the development of its mineral resources—and it is a feature that is most necessary to the material prosperity of any town or locality—has been the united support offered every endeavor by the business and professional men of the city. They have stood by the city with unwavering loyalty, and the present growth and universal prosperity are their reward.

One of the largest mining properties in the vicinity is that of the Granite Bi-Metallic company, and it is claimed for it that its mines are the greatest silver producers in the world, the values carried being almost entirely in this one metal. Before the slump came in silver, this company had in eight years paid over twelve million dollars in dividends.

The Granite Mountain Extension was located back in the 70s, but until it was acquired in 1880 by Mr. McClure, of St. Louis, was not credited with being more than a good prospect, and sufficient work had not been done to

more than demonstrate this. At this time Mr. McClure and associates took hold of the property, and during the next year expended some \$50,000 in development, and before the final development and demonstration of the property had been made an additional \$40,000 had been expended. The ores produced were of the base order, and were experimented on with varying success until 1884, when the company erected a mill of its own, which was put in operation the last of that year. Two years later the company increased the capacity of the mill to eighty stamps, and two years later built another mill with 100 stamps, giving the property a combined capacity of 180 stamps. From 1883, and up to the first of May, 1898, at which time the property was



BIMETALLIC MILLS-PHILIPSBURG.

turned over to the consolidated company, the following ores had been shipped:

Bullion to the value of.....	\$ 21,717,864.36
Ore to the value of.....	353,671.79
Slag to the value of.....	21,570.13

A total of.....\$ 22,093,106.28

The Bi-Metallic company purchased properties in 1883 from Mr. McClure for \$1,800,000, but did not commence active development operations for two years, and did not ship any ore until 1887, and in 1889 erected a fifty-stamp mill, enlarging the capacity to 100 stamps in 1890. Four years later a leaching plant was erected and put in operation, which proved a success. Up to 1898, this company had the following output:

Bullion to the value of.....	\$ 6,466,373.42
Ore to the value of.....	395,344.99
Sulphide to the value of.....	361,992.23
Concentrates to the value of.....	44,102.64

A total value of.....\$ 7,267,813.29

This brings the total value of the output of the two companies for the period stated up to \$29,360,919.57, the Granite Mountain company distributing \$12,140,000.00 in dividends, and the Bi-Metallic \$1,630,000.00.

The consolidated properties are model properties, containing miles and miles of tunnel workings, and these give ample evidence of the competent management and the energy and confidence of the proprietors.

These are the largest of the mines at Philipsburg, but there are a number of other very considerable properties, and many that are now in course of development, and which give every promise of becoming rich developers. The organization of the Montana and Bearmouth company, and the erection of their custom mill in the Bearmouth district marked a new era in Montana's mining industry, particularly in the milling methods. The conditions surrounding the organization of this company, and the establishment of this plant were in nowise novel in the west, though the company was the first to meet them in Montana. The whole mining and milling industry of Montana was dependent upon one of two plans of procedure when new camps or mines were started. Either hand sorting of the ore, and shipment to the smelters at Butte or Helena, or operation of a stamp mill, if the ore was free-milling gold ore, or of a concentrator if not, with subsequent shipment of concentrates to the smelters. Both methods were retarding in their effect, either being wasteful in the one case, or excessively expensive in the other. The opening of low-grade mines was prevented, and as was the case in the district tributary to this mill, the low grades of ore were left in the mine as filling when higher grades were taken out.

The Garnet and Coloma mining districts are excellent examples of the class of camps that are found throughout Montana. The conditions in these camps may be taken as fairly average of a dozen or more within the borders of the state.

In Garnet the veins carry gold to the value of \$15 to \$30 per ton, as an average of the whole vein, with occasional pockets and streaks of higher grades. With no facilities for milling the ore, the miners were obliged to resort to two methods; either to mine for the smaller pockets and streaks of first-class ore, rejecting the ore of less than \$25 in value by leaving it underground, or hand sorting of all. Both methods were expensive, as the cost of mining small veins is greater than that of large veins; and the labor of sorting and sacking added at least \$3 to the expense per ton. A summary of these expenses, which include mining, sorting, sacking, wagon haul to railroad at Bearmouth, freight and smelter charges, shows that the ore must carry at least \$23 per ton, as shipped, to pay expenses. Under such retarding circumstances few of the mines became more than prospects. The Nancy Hanks mine is said to have produced over \$500,000 in gold for its owner, but no others approached this figure. The Shamrock has been a shipper for some time, as have also the Anderson and Magone properties. One mill has been constructed in the Garnet district for treating the ores of the district, but more especially for treatment of the ore from the mines of the owner. This mill could not be classed as a strictly custom mill, since its regular practice was not to buy ores, but to treat the same for owners at a certain charge per day for the mill, with a return of a certain percentage of the gold extracted. The method of milling, stamp and concentration of tailings, with the disadvantageous basis of charges, did but little to assist the development of the

low-grade properties. In the Coloma district, which adjoins the Garnet district on the northwest, the Mammoth Mining company milled its own ores by stamps. The mill never treated custom ores to any extent, and all prospects in that district awaited development until the operation of the custom plant relieved them. In the spring of 1889 the company that established this plant was organized. The plan of organization, as agreed upon, is to act as millmen and purchasers of ore, and, at present, to operate no mines, depending upon the districts adjoining to furnish the ores. In order to encourage development and production, the highest possible prices are paid. A high degree of extraction was to be made, requiring the best metallurgical skill in milling, and all of the facilities furnished by the latest improved machinery and methods. By extending testing it was determined that the safest method of operation



BI-METALLIC MILLS—PHILIPSBURG.

was plate amalgamation, concentration on Wilfleys, and cyaniding of the tailings.

The site selected for the mill was at the point of union of Deep Gulch with Bear Gulch, near the old placer camp of Beartown. At this point the mill is easy of access from Coloma, down Bear Gulch, from Garnet, down Last Chance Gulch, and from the Top o' Deep Mines down Deep Gulch. The longest haul for the miners from any of the developed properties is about seven miles, which is from Coloma, but here, as in all cases, the haul is down hill. The site of the mill is about seven miles from Bearmouth station of the Northern Pacific railroad. Abundance of wood and water is near the mill. The mill cost about \$40,000 as completed.

The purchase rates are as follows: Upon delivery of the ore, and after treatment of the same, 90 per cent. of the assay value in the gold, and in silver, if over 2 ounces per ton, will be paid after deduction for moisture. In addition to this a charge of \$5 per ton is made for treatment. On these figures a fair profit can be made on \$15 ore in Garnet which heretofore was thrown on the waste dump. The expense of hauling is \$1.50 per ton, and of treatment is \$5, leaving a value of \$8.50, of which 90 per cent., or \$7.65, is the net profit of

the owner. The effect of this ready market for such low-grade ores must be very helpful.

There are a number of other mining camps in the county that promise to develop richly, and there are many opportunities offered capital for safe investment in development of promising properties.

The area of Granite county is 1,557 miles, or over 996,000 acres, 103,482 of which are assessed. The county derives its name from the famous Granite mountain silver mine, and was organized in 1893 from parts of Missoula and Deer Lodge counties. Some of the first settlements in the state were made in this county. The county is principally mountainous and timbered, but contains the large and fertile valleys of Flint creek, Willow creek and Hell Gate, and large areas of grazing lands. These valleys are notably good agricultural



GRANITE MILLS—PHILIPSBURG.

regions, and lying in close proximity to the large mining districts, the farmers find a convenient and profitable market for their produce. All grains, grasses, vegetables and root crops are cultivated in the valleys, and yield well, and all small fruits are grown. The more elevated portions are principally cultivated for hay. All cultivated lands are irrigated, and the available land and water are generally appropriated. The area of farming land could be largely increased by a reservoir system, with which the surplus water in the earlier season could be stored. An extensive reservoir system could be established at comparatively small cost. Improved farms with water rights can be purchased in the several valleys for from \$12 to \$35 per acre. Fuel and fencing timber can be had convenient to all farming districts. The principal industry of the county is mining, and while the county suffered from the depression of the silver mining industry, new life is being infused, and the mining camps are now scenes of renewed and great activity.

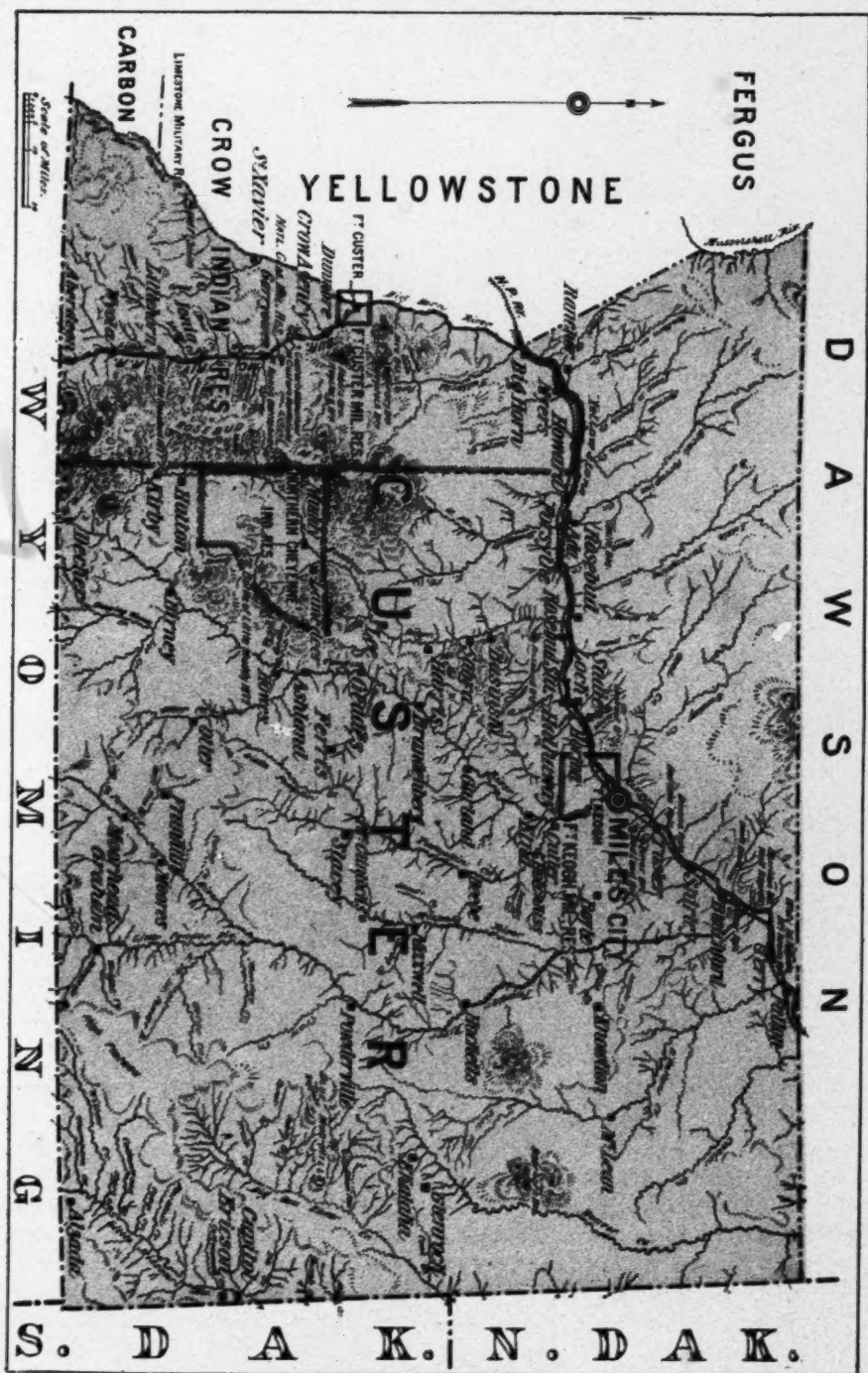
The future of Granite county and of its county seat, Philipsburg, is not of the speculative order, but is a certainty founded on its proved and extensive resources. The real estate assessment of the county is \$1,205,354, the personal property, \$618,130, and the railroads, \$304,746, making a total valuation for assessment purposes of \$2,128,230.

Custer County and Miles City.

This Is Not Only the Largest County in Montana, But Is as Well the Largest County in the United States—Sheep, Cattle and Farming Are Its Chief Sources of Wealth Production.

Custer county lies in the extreme southeastern part of the state, and is one of the few counties of this mountainous country that may be classed as being all prairie, and it enjoys the distinction of being the largest organized county in the Union of states. The name of the county is in memory of General Custer, who, with his troops, were massacred by the Sioux in June, 1876, in the valley of the Little Big Horn, a historical district that is now included in an Indian reservation in the western portion of the county. Since the frontier days, when the county was described as "all the remaining portion" of the then territory of Montana, and had boundaries that outlined the dimensions of a very large state, it has given to her younger sisters a considerable portion of her princely patrimony, but is still the largest county in the state, if not in the nation, her present landed estate being 26,580 square miles. Some idea of the immensity of this county may be obtained by comparing its area with that of some of the larger states. It is larger than West Virginia, more than two-thirds as large as Indiana, and nearly half as large as Illinois.

The topography of the county may generally be described as prairie, though a portion of it is occupied by the Bad Lands, and in the extreme southeastern and southwestern portions there are some mountainous districts. The chief industries of the county at present are those of cattle, sheep and horse raising, and in this general line it ranks with the foremost stock sections of the state. The climatic and other natural conditions will make the county for all time a stock-raising and wool-growing section, but as this is one of the most certainly profitable businesses, the fact is not to be regretted. There are valleys throughout the county, however, where there are many and successful farms, and as irrigation of the more arid lands has made a good start, as the watering of the upper lands is accomplished, general farming will encroach more each year upon the open range, and the agricultural interests will become proportionately more diversified. Aside from the Bad Lands section, the lands of the county are of the richest, and respond, when irrigated, with a growth that is tropical. The aridity is due, not so much to the absence of water as to the limited rainy season, which extends only from the middle of April to the last or middle of May; a scant six or eight weeks, during which time, though copious rains may fall, much of the water passes off in freshets,



Assessed Valuations.

Real, \$1,726,686; personal, \$3,899,679; railroads, \$1,055,429; total, \$6,681,794.

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time, though copious rains may fall, much of the water passes off in freshets, crops unless sustained by the artificial nurture that irrigation supplies. With this help the intense heat of the later summer months only adds to the luxuriance of the growing crop, and thus results far in excess of eastern farming are easily and regularly obtained. Nearly every farmer in the county manages in some way to get water on his land, the irrigation scheme comprising all areas, from a small garden patch to hundreds of acres of alfalfa and native blue-stem. In the majority of instances it is an individual ditch by which the rancher conducts the water from some neighboring creek onto his land. In other instances, when the water supply admits of it, co-operative or com-



MILES CITY.

munity ditches are constructed and maintained by a coterie of neighbors with better results than individual effort can attain, but canals that contemplate the furnishing of water to any considerable number of individuals and over an extended area are costly affairs, and for this reason are scarce. Custer county has only one such, the one familiarly known as "the Tongue River ditch." As long ago as 1882 the idea was conceived of taking out an irrigating ditch from a point on Tongue river about fourteen miles above Miles City, for the purpose of reclaiming the arid valley that stretched between these points. Inadequate attempts at irrigation had demonstrated the fertility of the soil when irrigated, and stimulated the enterprise, and in 1882 a stock company was formed of about fifty stockholders, made up of the business men of Miles

City and the officers of the Fifth United States Infantry, then stationed at Fort Keogh. The line of the canal was surveyed, a portion of it excavated, and a dam constructed at the point selected by the engineer. Owing to faulty construction, and a lack of knowledge of the immense pressure of the confined waters of the river at the time of the spring break-up, the first dam was carried out in the spring of 1883, but nothing daunted, the company went bravely to work again that year and completed another and stronger dam, but this, too, proved inadequate, and was wrecked, though not wholly destroyed, in the spring of 1884. Meanwhile the misfortune of the first year had disheartened many of the stockholders, and financial difficulties ensued,



MILES CITY.

forcing the original company into the hands of a receiver, and in the evolution of events following a new company was formed, composed principally of the old stockholders, and a third dam was built, which still stands as a monument to the dogged perseverance of its projectors. Year by year, as funds could be raised, the excavation of the canal progressed, its onward march marked by the green fields that were in such marked contrast to the adjoining desert, until the original scope of fourteen miles was reached and passed, and its beneficent influences extended down the Yellowstone valley a distance of about eleven miles farther, giving a total length of twenty-five miles to the canal. In 1890 the enterprise was christened the Miles City Canal and Irrigating company, which title it bears today. Although capitalized

for only \$50,000, the work, first and last, has cost about \$150,000, it being the policy of the company to put all earnings into betterment of the plant, changing temporary work to permanent as rapidly as the income will allow. There is tributary to the canal about 25,000 acres of land susceptible to irrigation. On the line of the Miles City canal there are eighty irrigated farms, and the aggregate area of all of them does not exceed 4,000 acres, an average of fifty



NORTH SIDE MAIN STREET—MILES CITY.

acres to the farm. These figures refer only to the land under irrigation, as most of the farmers have range stock interests, and have a large acreage under fence for pasturage.

Land in the valley before the canal was constructed went begging at \$2.50 an acre. It is now worth from \$25 up, according to the location. Some desirable tracts near town are worth \$100 an acre. The quantity of water used in irrigating is estimated at three-quarters of an inch to one inch per acre, according to the condition of the land and the kind of crop, and some are able to do more with a given flow of water than others. The prices charged by the company for water are as follows: On cultivated land, \$2 per acre; on hay land, \$1.50 per acre, and on new land, \$1 per acre. One of our illustrations shows the head gates of the canal and dam, fourteen miles up Tongue river from Miles City. The dam is a massive piece of heavy timber work, with rock ballast, 200 feet wide, and backing up twelve feet of water. The canal is twelve feet wide and about four feet deep, and at present carries about 3,500

inches of water. The work of enlarging and cleaning out is constantly going on, and for this purpose a steam dredger is kept in service.

Miles City, the business center, as well as the county seat, is a lively and growing town of about two thousand people. It is pleasantly located on the Tongue river just above its junction with the Yellowstone, and is composed of residence and business structures that are both modern and substantial, and whose appearance adds to one's impression of the solidity, prosperity and assured future of the town. There are graded streets and curbed and paved gutters, an ample and thoroughly efficient water supply system, and a complete sewage system that extends over the residence portions as well as the



STATE REFORM SCHOOLS - MILES CITY.

business streets, and the darkness of the gloomiest night is dispelled with numerous electric arc lights. Every house is surrounded by a forest of young trees and decorative shrubbery, and every residence has its comfortable lawn. One of the most recently established enterprises, and which is indicative of the go-aheadativeness of the people, is the Custer County Commercial Telephone company, whose scope is the entire county, with over 400 miles of line contemplated. These lines will bring into communication with Miles City every ranch and postoffice in this big county, and enable isolated settlers to make quick demand upon the town for pressing needs.

The Montana State Reform School is located about one mile east of Miles City on land partly donated by the citizens of Miles City and partly pur-

chased by the state, the domain of the school comprising in all one hundred acres, and, with the buildings hereafter described, presenting quite an imposing appearance, especially in the summer season, when the fields are green, the trees and shrubbery luxuriant and all nature smiling from the beneficial effects of irrigation. The buildings thus far constructed are a three-story brick, 100x50, occupied by the director and female officers and assistants, and by the female inmates of the school; one three-story brick building, 104x50, occupied by the boys and male officials; a detached two-story brick building, 40x80, used as a boiler house and laundry, and a two-story brick barn, 40x80, besides several smaller buildings, used as store houses, etc. A complete sys-



CUSTER COUNTY COURT HOUSE—MILES CITY.

tem of sewerage is in operation, discharging into the Yellowstone river, some two miles distant, and an abundant supply of soft and pure water is had from an artesian well. The plant has thus far cost the state about \$60,000, but the results are all in sight, and Montana, though one of the youngest of the sisterhood of states, can feel a reasonable pride in the advancement made in the direction of training and educating the incorrigible, the vagrant and the vicious youth of the state by this institution.

In the matter of fuel Custer county is especially favored. Nature has underlaid the whole county with deposits of lignite coal that ages cannot materially exhaust. This coal is quite unknown to the general world as a fuel, for the reason that it is not adapted to export. Geologists decline to honor it

with the title of coal, but admit that it will be coal sometime. Nevertheless it answers all the purposes of fully matured coal, and in a sparsely timbered country like this, it is a boon that lacks proper appreciation only because of its great abundance and easy procurement. Any one with team and tools can lay in his winter supply of coal from nature's storehouse at no greater cost than the time and labor involved in the undertaking. Its identity as a calcined product of wood is readily recognized, the grain of the wood, the knots, and sometimes the imprint of the leaves being plainly discernable, and quite often fragments of pure and unassimilated resin being in evidence. It crops out everywhere, in "cut banks" and bad-land buttes, in veins of from two to six feet in thickness, and in these exposures can be mined without any expense but labor, but the mines that are regularly and steadily operated for the public

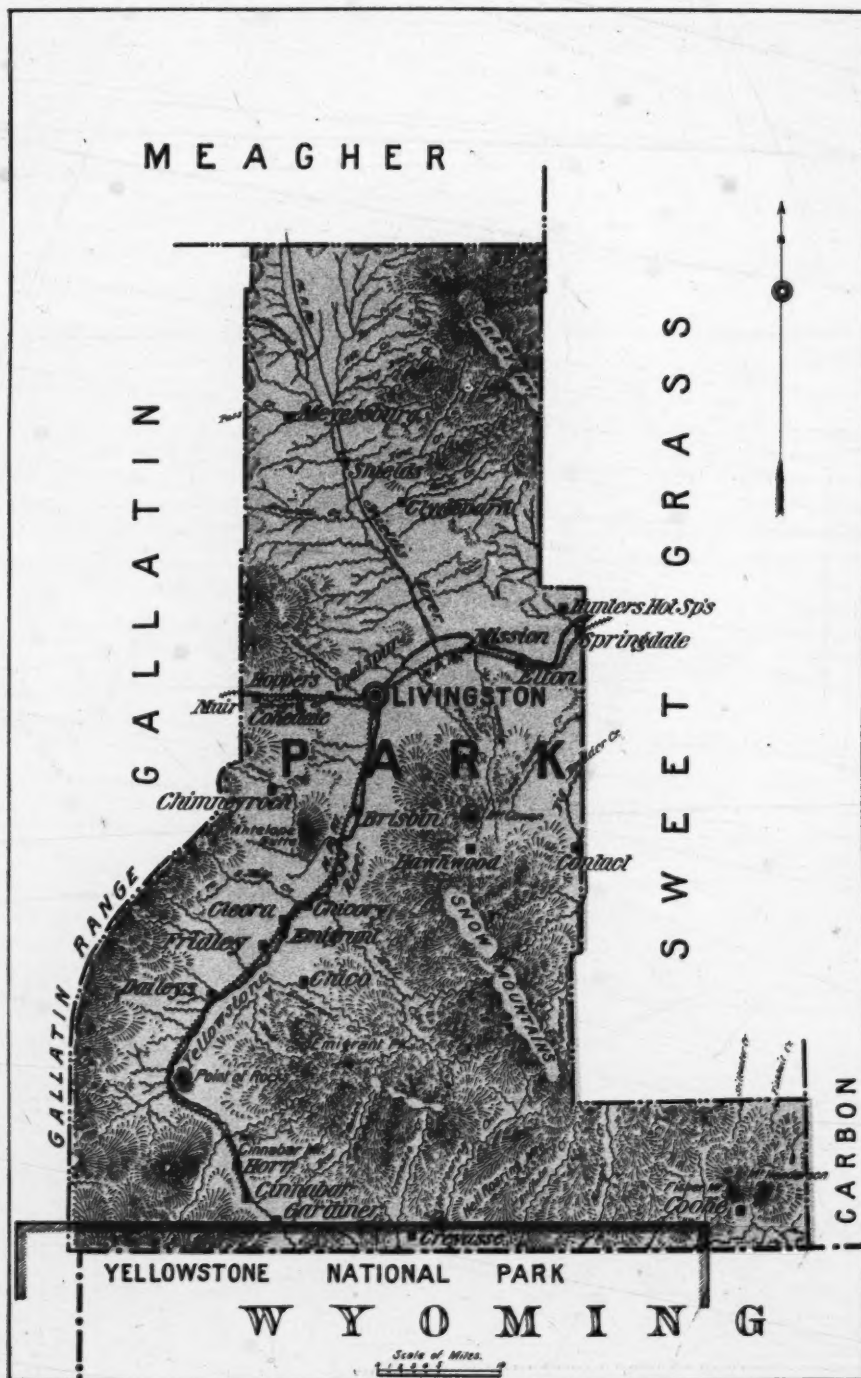


A GRADED SCHOOL—MILES CITY.

supply are below the surface, the deposit being found again and in a denser and more mature condition at a depth of about twenty to twenty-five feet. The lignite of this section is denser and older than the North Dakota deposit, taking the product of the mines at Sims, Dickinson and other places along the line of the Northern Pacific for samples. When freshly mined, our coal is as black and glossy as cannel, but exposure to the air and sunlight causes a "slacking" of the outer skin. It is this feature that prohibits export, as repeated handling and exposure induces disintegration that is more or less rapid, according to the exposure and frequency of handling. As a fuel for cooking or heating, it stands in the highest favor with those who have used it. The cost per ton delivered is from \$2 to \$2.50.

The assessed valuations of the county are: Real estate, \$1,726,686; personal property, \$3,899,679; railroad, \$1,055,429, making a total of \$6,681,794.

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Assessed Valuations.

Real, \$2,113,345; personal, \$1,327,998; railroads, \$454,036; total, \$3,895,379.

Park County.

One of the Prosperous Counties of the State, Securing Its Wealth From a Combination of Stock Raising, Farming and Mining.

Park, in the line of natural resources, is one of the most prolific of the state. It has an area of 1,798,000 acres, a realty assesment of \$2,113,345, personal property \$1,327,998, and railways \$454,036, making a total assessment of \$3,895,379. The population of the county is 7,341. The first settlement of the county was at Yellowstone City, which in early days was a prominent trading point. From here parties were made up in the early days to explore for minerals in the district which is now included in Park county, with the result that several quite important settlements were established in various portions of the county. Mining naturally attracted the attention of the early settlers, but later the various other resources of the district were recognized, and soon a thrifty settlement of ranchers pushed into Paradise valley in the upper Yellowstone. The first crops these hardy and enterprising frontiersmen produced on their as yet but slightly developed ranch lands, convinced them of the worth and value of the soil for agricultural purposes, and within a short period a considerable portion of the lands, suitable for the growing of grain and vegetables, were occupied by an experienced lot of ranchers. The district did not make very rapid advancement, however, until the advent of the Northern Pacific railroad in the fall of 1882. This marked the beginning of a general development of the district that now comprises Park county, which was created by act of the territorial legislature February 18, 1887, and was organized May 1 of the same year. Since the organization of the county rapid strides have been made, and despite the fact that nearly one-half of the area of old Park has been lost in the creation of Carbon and Sweet Grass counties, the assessed valuation is nearly four million dollars, and the county boasts of a population of more than 5,000. During the past ten years a number of substantial business centers have sprung up, the most important of which is Livingston, the county seat, a bustling little city of 3,000 population.

Included within the boundary lines of the county of Park is one of the richest and most promising districts of Montana. Nature has been lavish in her gifts, for every portion of the county abounds in a variety of rich natural resources, which, when more fully developed, will make her one of the greatest wealth-producers in the state. The county is nearly ninety miles in length and about thirty-five miles in width. The total area is about 3,000 square miles, three-fifths of which is agricultural and grazing land, the remaining

two-fifths being mountainous, the latter of which is rich in gold, silver-lead ores and coal. The Yellowstone river, which takes its source in the National Park, flows north and through the county for a distance of about ninety miles, and is bounded on either side by agricultural lands, which are being rapidly settled up with a thrifty class of farmers. The numerous tributaries of the Yellowstone river also have within their valleys large tracts of very productive lands, the most important of which is the Shields River valley. The agricultural district in Park county is extensive in area. It includes the broad and productive valleys of the Yellowstone river and its numerous tributaries, which, with the bench lands adjacent, form a district which will eventually support many thousands of people engaged in the agricultural pursuits. The splendid irrigation system of the upper Yellowstone and Shields River valleys make a failure of crops next to impossible. All kinds of small grain, hay and fruits are successfully produced. Of late it has been shown that the valleys are well adapted for the raising of fruit, including apples and many varieties of berries. Ranchers are now paying considerable attention to the production of fruits, and there are many promising young orchards in the valleys. The bench lands of the Shields River valleys produce an excellent quality of wheat, which is pronounced to be equal to that raised in the famous Red River valley. Probably no locality in the entire west offers such advantages for diversified farming as does Eastern Montana. As yet a large percentage of the tillable lands in the Yellowstone and tributaries are unsettled, but with the development of the mining resources surrounding, every foot will be improved and occupied. Several large irrigating projects are now under way, which, when complete, will reclaim thousands of acres of valuable bench lands.

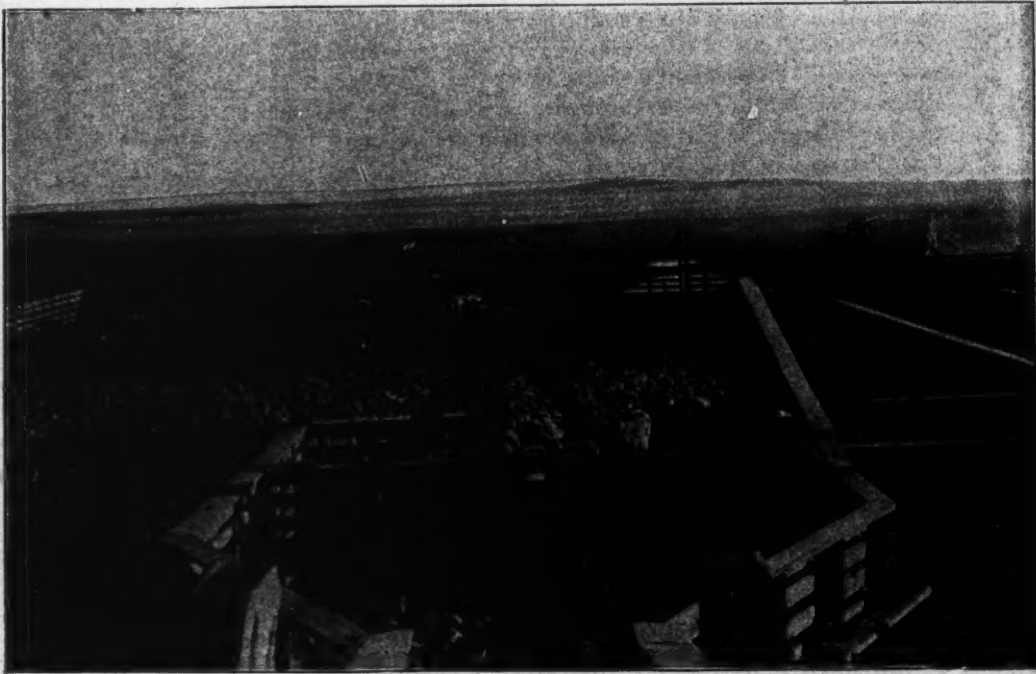
The foothills adjacent to the agricultural lands offer splendid inducements for those wishing to engage in stock growing. The stock interests of Park county are among the most important of its many industries. Besides the many large flocks of sheep and herds of cattle which range on the mountain sides for many miles in every direction from Livingston, the farmer in the valley engaged in raising grains and vegetables has placed small bands of sheep and cattle upon the surrounding foothills, which from present appearances will be no small aid in making the agricultural pursuit a complete success. Park county offers unusually good opportunities for stock raising on a large scale. The foothills and mountain sides give an abundance of feed during the winter and summer months. The winter season is mild, and it is seldom necessary to provide either hay or shelter during this period. This is a big advantage over the majority of stock-raising localities, and makes it possible to conduct the industry at an unusually good profit.

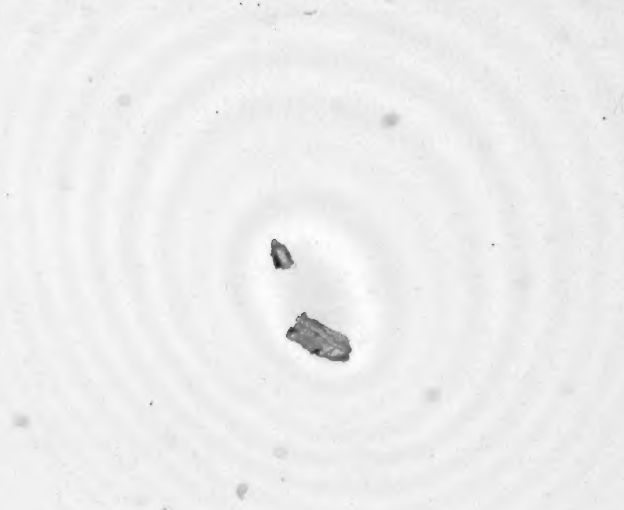
Mining operations in Park county were first begun in the fall of 1872, when prospectors discovered rich placer diggings in the upper Yellowstone valley. Soon afterward important discoveries were made in the territory now embraced within the famous New World mining district, located in the southern part of the county and adjacent to the National Park. During the few years following important discoveries were made in the mountains ranging along both banks of the Yellowstone river, among which was the discovery of large deposits of coal in the range of mountains to the west of Livingston, and ex-

tending up the river fully fifty miles. In 1882 a part of the Crow reservation, containing rich mineral lands, was thrown open to settlement. Then began an extensive development of the properties previously discovered. The coal deposits attracted the attention of smelting companies in the western portion of the state, and when it was demonstrated that a large percentage of the coal was suitable for coking purposes, the mines were developed and large plants were erected for conducting the product into coke. The greatest rush, however, was to the New World mining district, where during the first ten years after it became a part of the public domain, no less than two thousand claims were located. It is conceded by mining experts that the mineral deposits of Park county are among the richest and most extensive in the west. The mines of the New World district, located in and about Cooke City, have for many years been famous for their wealth, but because of their peculiar situation they have not been provided with railway transportation, and for this reason it has been difficult to operate them to advantage. These mines are located about eighty miles south from Livingston, in the extreme southern part of the county. Cooke City is surrounded on all sides by high mountain ranges, and has no natural outlet except by water grade furnished by Soda Butte creek, which passes through a portion of the National Park. Despite the fact that the means of transportation are so expensive, several mines in this district are being successfully operated. Among them are The Daisy, The United States, The Morning Star, The Alice E, the Great Republic group, Homestake, Moulton, Black Warrior, White Warrior, Little Daisy, Snowslide and many others, and all would soon become important producers were it not for the transportation difficulties. No one familiar with the district has any doubt regarding the great resources or future of the camp. The pioneer settlers of Cooke City were the strongest types of western miners, and in developing the resources of this district they builded for the future. To the south of Livingston, and extending up the valley of the Yellowstone, is another rich mineral district which gives most favorable indications of becoming a great producer of precious metal. During the past few years operations on these mines have been carried on very successfully. With but one or two exceptions the results have been satisfactory, and each month the prospects are growing better. The McCauley Milling company's property ranks as one of the most prosperous. A twenty-stamp mill is kept in continuous operation with very good results. The placer grounds bordering on the Yellowstone river in this locality are very rich, and have been worked successfully for a number of years. In the bluffs adjacent to these placer grounds and extending up the Yellowstone and along the several tributaries are to be found extensive deposits of free-milling quartz. Among the promising and most important mines of the upper Yellowstone may be mentioned the Great Eastern, St. Julian and the McCauley Milling company's properties. These show up immense bodies of free-milling quartz. The ore is gold-bearing and assays from \$20 to \$40 per ton and up. The Natural Bridge district is attracting considerable attention. Almost every portion of Sheep mountain, which is included in the district, has been located, and the prospects for the future of the camp are flattering.

The coke and coal industry in Park county is rapidly assuming large proportions. Two or three quite extensive coking works have been erected, the most important of which are the Montana Coal and Coke company at Horr, and the Yellowstone Coal and Coke company at Cinnabar.

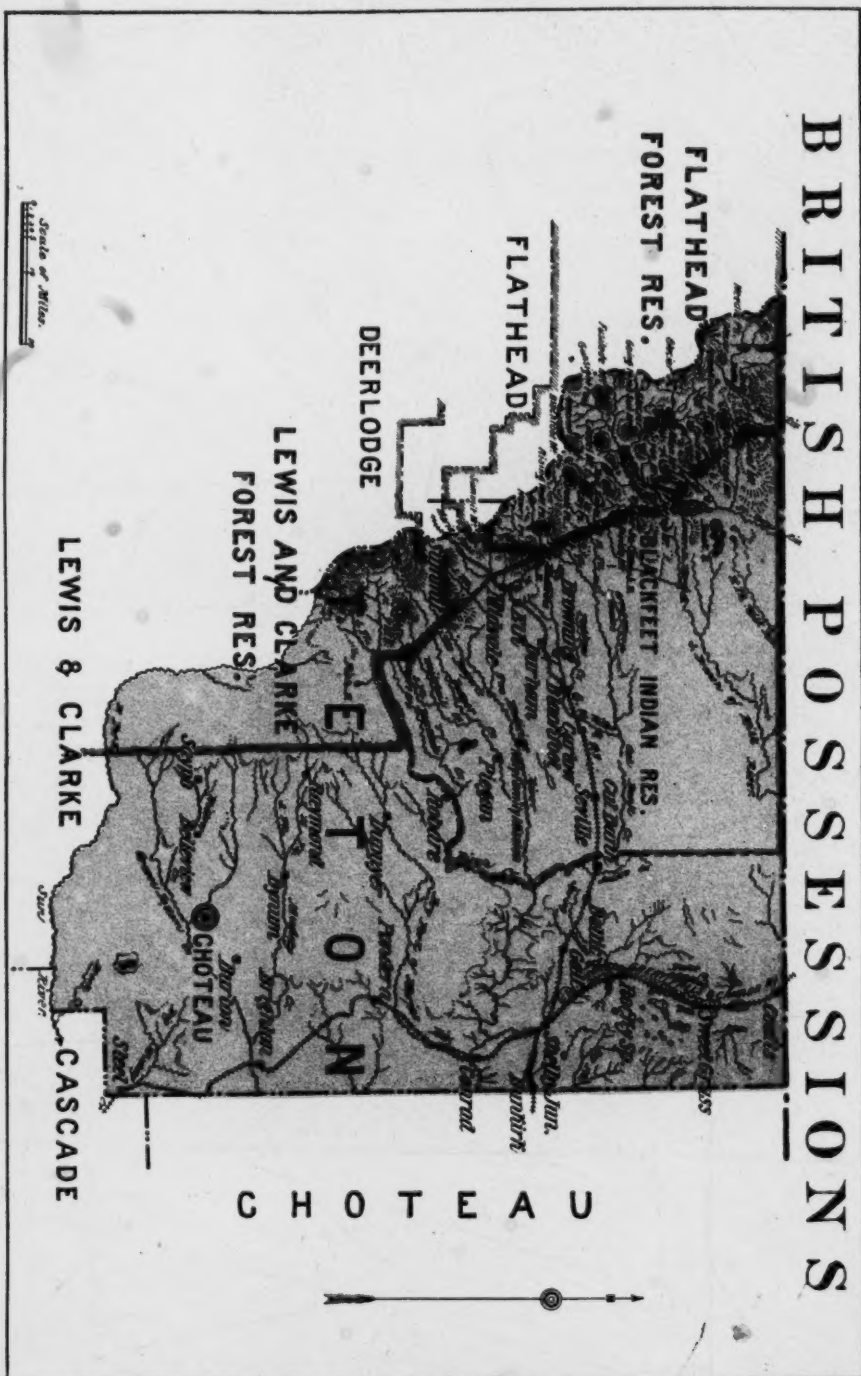
Park county is a logical point for the location of reduction and smelting works. Here is an inexhaustible supply of fluxing ore which, with magnificent water power to be found at several points on the Yellowstone river, makes it possible to reduce the ore at the lowest possible cost.





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Assessed Valuations.

Real, \$761,943; personal, \$1,467,035; railroads, \$661,060; total, \$2,890,038.

Teton County 3 3 a New Mineral District.

The Greater Part of the County One of the Principal Cattle and Sheep Districts of the State—Agricultural Resources—The "Ceded Strip" Promising to Develop a Big Copper Camp.

Teton county is one of the largest counties in the state, and except for that portion along its western border that is occupied by the east slope of the Rocky mountains, is prairie, range and agricultural lands. The area of the county is 7,900 square miles, and the Blackfeet Indian reservation covers about one-quarter of this, with perhaps half of their allotment in the mountain range. The assessed realty of the county is \$761,943, the personal \$1,467,035, railways \$661,060, making a total of \$2,890,038. Teton county was legally organized in 1893, and now has a population of 5,080. The Great Northern crosses the northern part of the county from east to west, and the Great Falls and Canada passes through the eastern part of the county from the northern to its southern boundary.

Stock and agriculture have been the only resources of the county until the recent ceding of the "Ceded Strip" of the Blackfeet Indian reservation, which was purchased by the government and opened to mineral locations. This strip comprises a couple of million acres, and lies in the mountains in the northwest portion of the county. During the past year there has been considerable development done on the mines of the Strip, and the revelations of the tunnels seem to demonstrate that it is going to prove a great copper-producing camp, and in this event the county will add one of the most profitable of wealth producing industries to its resources. It is estimated that there are 150 square miles of tillable lands not yet irrigated, and the remainder of the county, except the mountains, is chiefly adapted to grazing. The elevation of the valleys range from 3,000 to 4,000 feet. The soil varies from a sandy to a gravelly loam, and from one to six feet in depth. Wheat, oats, barley, rye, flax, timothy, alfalfa and all the vegetables and root crops have been and are being cultivated successfully. All the small fruits, and in some localities apples, are grown.

The depth of snowfall ranges from 12 to 20 inches, but chinook, or warm winds, are frequent, and the snow does not remain continuously. Fuel and timber are obtained from one to forty miles from the farms, and water is obtained at a depth of from 10 to 15 feet. Irrigation is necessary everywhere for cultivation. Hay, oats and barley are considered the best paying crops,

and what is not fed on the ranches is marketed at Choteau, Great Falls and other points. Great Falls will always furnish a good market for the products of the county.

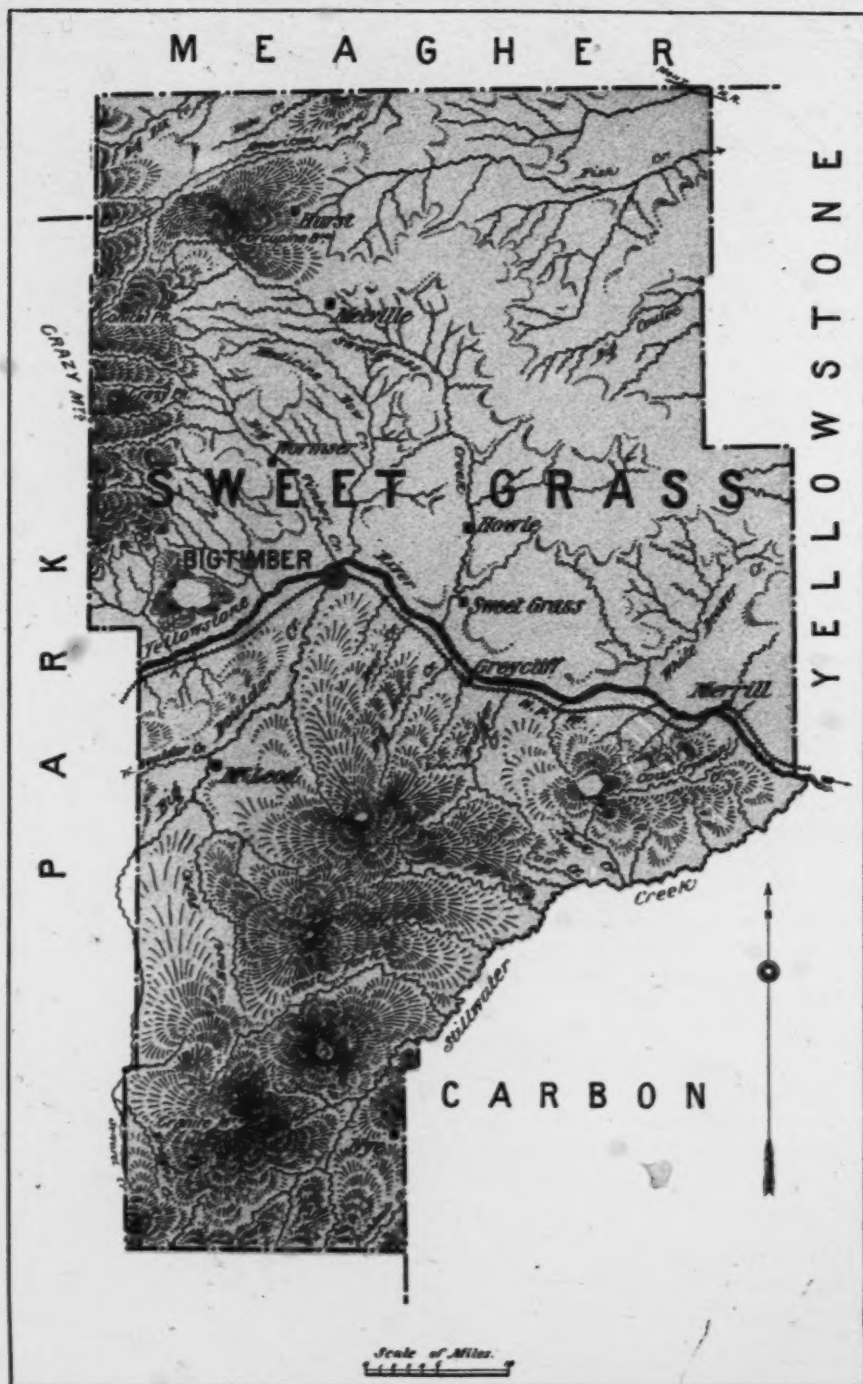
There are good ranges for stock near all the farms, and there is a good field for farmers who desire to combine farming and stock-raising. The Montana Land and Water company has brought out a canal with a capacity of 12,000 inches of water, and has reclaimed about 10,000 acres. A large part of this land has been disposed of to settlers, who have colonized and are cultivating the land. Other large ditches are being built, and much land is being brought under irrigation. A co-operative company is talked of to bring water from the north fork of the Sun river to cover a large and fertile body of land in the southern part of the county.

During the past year the Conrad Investment company, of Great Falls, has put in an irrigation system in the neighborhood of Dupuyer that covers over forty thousand acres of fertile lands, and a number of private ditches irrigating single ranches have been put in, the water being appropriated from the numerous streams that flow east from the neighboring mountains. In the raising of cattle and the growth of wool the county is among the first in the state, and while with the rapid increase of irrigation the agricultural products will be greatly increased, the free range is so wide that there will not be any curtailment in these important industries. Great Falls is the market for the products of the county, and will always afford a ready purchaser for all the agricultural products.

Choteau, the county seat, is a busy little town of several hundred population, and is the distributing point for the largest part of the territory within the county.

With the progress of irrigation Teton county will receive the first and most rapid benefits, as it is practically all, except the mountainous portions, susceptible to artificial watering, and as it is next to the source of water supply, will be the first to be served. It will not be a very distant future until the county will be one of the heaviest producers of agricultural products, live stock and wool, in the west, and with the development of its mineral resources, will be one of the wealthiest counties in the state.

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Assessed Valuations.

Real, \$944,745; personal, \$1,380,964; railroads, \$302,458; total, \$2,628,167.

Sweet Grass County.

Large Agricultural Districts With the Most Prolific Soil and Congenial Climate—Rich Quartz and Placer Mines—Coal Measures.

Sweet Grass county has passed its five-year period, and is now one of the established and prosperous divisions of the state. The population of the county is 3,086. The realty assessment for this year was \$944,745, personal property \$1,380,964, railways \$302,458, making a total of \$2,628,167. The area of the county is about three thousand square miles. It would be hard to find a more prosperous community, or one more contented than those occupying the many and picturesque valleys of the county. Nearly, if not quite all the government land is occupied hereabouts, in quarter sections. The soil is very productive, and there is good range toward the Crazy mountains, where there is also a plentiful supply of both dry and green timber for ranch improvements. In early history of the settlement, the land which is now cultivated so successfully was given over to cattle and horses. Sheep were first introduced in the '70s, and since that time progress has been very rapid. Today the Sweet Grass is fenced from its head to its mouth; the land is well watered, naturally and artificially, and produces abundant crops of hay, vegetables and grain. Cattle and horses have, for the most part, given way to sheep.

The Fish Creek country, one of the finest grazing districts in the state, lies to the east of Melville. The land in the Fish Creek country is, for the most part, more or less broken, and the hills, on which the snow seldom lies more than a day or two at a time, are admirably adapted for winter grazing. The strong chinook winds that sweep the country keep the ridges bare, and it is seldom necessary to feed stock. The Fish Creek country is devoted exclusively to the sheep business. The settlers there have, however, a system of dams and reservoirs in view for storing the water which now runs to waste in the early spring, and as these are built the reclamation of the arid lands will follow, and farming will then be combined with wool-growing.

The territory lying between the West Boulder and the Yellowstone rivers, comprising 44,448.65 acres, has been segregated by the State Arid Land Commission, and a contract let to the Holland Irrigation Canal company for the construction of a canal for its irrigation. Under the same contract 8,200 acres adjacent to Big Timber creek, and about ten miles north of the town of Big Timber, will be reclaimed by a canal. The commission has purchased the canal system of this company, which a few years ago secured the location of a colony of Hollanders at the point mentioned, and hopes within a short period to complete the construction of the system. This

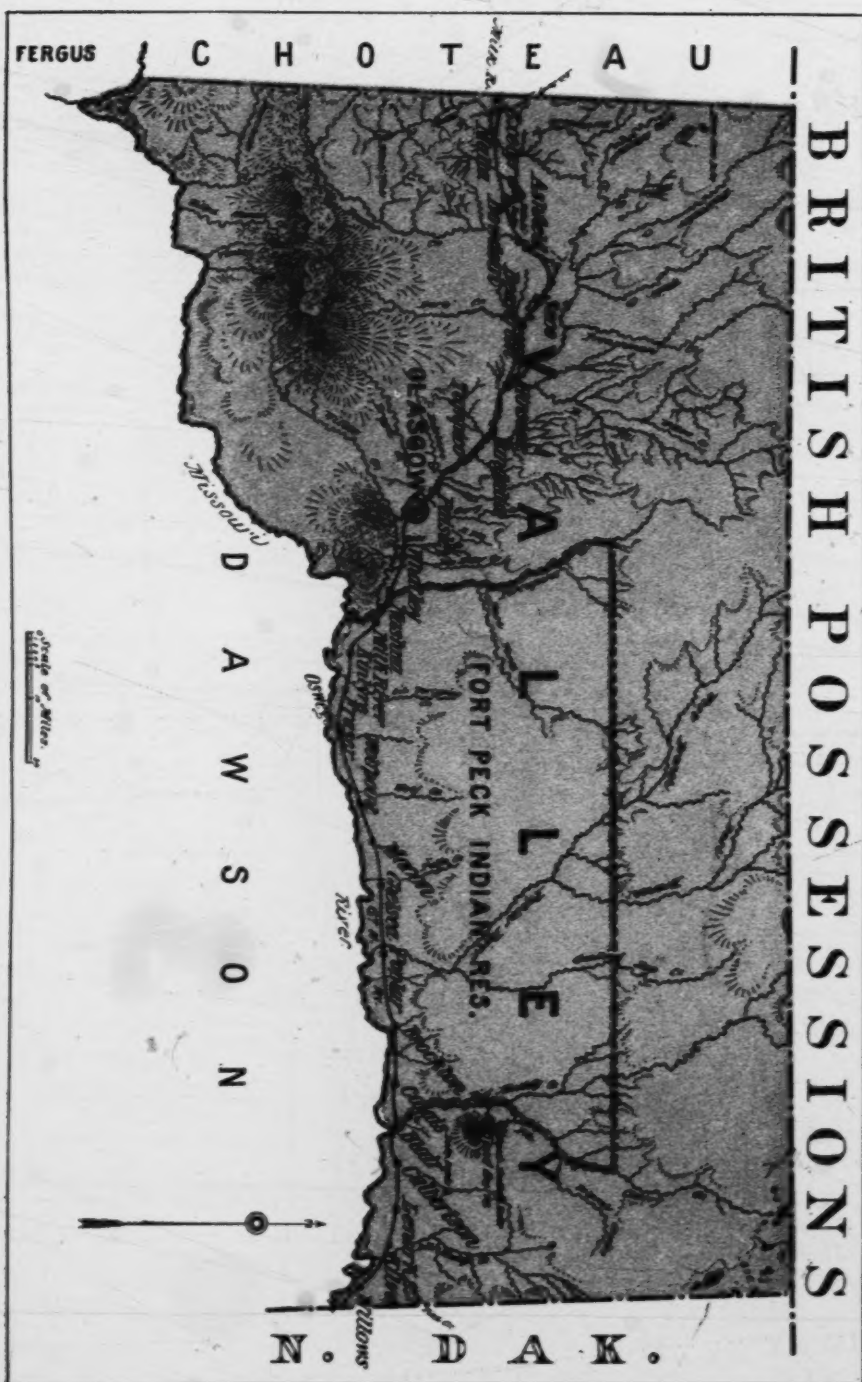
colony has grown into a very prosperous community of about fifty families. When the colonists located on the newly irrigated lands of the company, they had nothing; now they are in possession of well developed farms, enjoying all the conveniences of agricultural communities in the older states, but securing a meed of prosperity that is not nearly equalled by the eastern farmer. The colony has a cheese factory and a demand for its product that exceeds the output. The community has a Dutch Reform church, and there is an excellent public school. Arrangements have been made to extend the colony over all the lands in that district, and the task will be fully accomplished during the next two years. When the settlement of this district is completed, there will be no more prosperous or desirable section in the northwest.

South of Big Timber is the Boulder river and the Boulder valley, the former famous for its unsurpassed trout fishing; the latter for its fertility and beauty. There is no prettier drive than from Big Timber to the Natural Bridge falls, at the head of Boulder river, and there is no better trout fishing in the world than the Boulder river furnishes. A succession of fine, well improved farms cover the distance from Big Timber to the head of the river, a distance of thirty miles. Along the course of the river and its branches all the land is occupied. The settlers are almost exclusively farmers, and they are especially successful. They raise just about everything in the line of fruits, vegetables and cereals that can be raised in Montana. Back from the river, on either side, is an abundance of land as yet used only for grazing purposes, but soon to be as fruitful as that near the river. These lands can be irrigated from the Boulder, and propositions toward that end are rapidly developing. The Natural Bridge and the falls are the scenic wonders of this county, but it is impossible in the space allotted to do them the scantiest justice. The National Park has nothing more grand and wonderful than the Natural Bridge, falls and canyon.

At the southern limits of the county is the mining camp of Independence. The place is quiet now, but prior to 1893 it had all the bustle and life of the typical Montana gold mining camp. The Independence mine yielded nearly \$100,000 in gold in one season, but the financial stringency compelled a cessation of development work which has not yet been resumed. Other quartz and placer mines are being worked in the district with encouraging prospects. Coal has been discovered along the Boulder, a six-foot vein of fine quality being recently opened. A railroad up the Boulder to the National Park—an entirely feasible route—affords an opportunity for the profitable investment of capital, which will not long be neglected. Such a road, besides reaching the National Park, could tap the mining camps of Contact, Independence and Cooke City, and the Natural Bridge falls, which affords an easily improved and large water power.

Big Timber is a substantially built town with more business about it than many an eastern town ten times its size, and its wool market reaches over three million pounds a season. There are also large exports from this point of mutton and beef. An industry that is now underway, and will be in operation the latter part of the coming summer, is a woolen mill, and with the successful operation of this industry others will quickly follow. The successful establishment of a fifty-barrel flour mill has been of inestimable value to the agricultural community, as has the Sweet Grass creamery, which has found a ready market for its entire product. Big Timber has banking, church and school facilities, and enjoys the advantages of a thoroughly modern young city.

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Assessed Valuations.

Real, \$206,487; personal, \$926,214; railroads, \$1,081,200; total, \$2,213,901.

Valley County 3 3 Stock and Agriculture.

This Is One of the Prairie Counties of the State, and Makes a Good Record of Wealth Production.

Valley county is located in the extreme northeastern corner of the state, and of itself would make a sizeable state. It was established as a county in 1893 by detaching and organizing as a separate county all that portion of Dawson county lying north of the Missouri river. Its estimated area is 13,486 square miles, which includes the Fort Peck Indian reservation. The estimated population of the county is 1,500. The principal industry of the county has been, and probably will continue to be stock-raising, although of late years considerable advance has been made in the development of the agricultural resources.

The assessment of the county for this year was, realty \$206,487, personal property \$926,214, railways \$1,081,200, making a total of \$2,213,901. The population of the county is 4,355. The assessment for the year of livestock was as follows: Cattle, 55,440; sheep, 111,629; horses, 5,179.

The Milk river flows through the central part of the county, watering a broad and fertile valley, capable of sustaining a large population in plenty. On either side of this great valley are the rolling prairies that afford the pasture in which lies the foundation of the present and future wealth and prosperity of the people. These grazing lands are adjacent to the valleys, making combined stock-raising and farming the natural method of development of the industries of the county. It is estimated that 300 square miles of the land in this county can be irrigated.

The soil of the valleys is generally a rich black loam that produces abundant crops of grain, grasses, vegetables and root crops. It is said by some that corn can be grown, but experiments have not yet fully determined that it can be profitably raised. In the lower Missouri valley watermelons are grown to perfection. The average snowfall is light—from four to six inches; wood is plentiful along the streams, and water is obtained in wells at from ten to fifty feet. The Missouri river forms the southern boundary of the county, and there is room for a large number of farmers in the valley along this river.

The Great Northern railway traverses the county from east to west, having 204 miles of track in the county.

Irrigation is receiving considerable attention, particularly for hay in connection with cattle and sheep-raising, and irrigation for farming purposes is

beginning to be tried, but is still in its infancy. But in a very few years irrigation will certainly make changes for the better all over the county. The valleys will be turned into great hay fields, and the bench land, breaks and bad lands into pastures and range for stock. The tendency seems to be to run smaller bunches of cattle and sheep, and raise hay enough to guard against the danger of hard winters. Farming in Valley county for more than local consumption is a thing still in future. For an open prairie country, the country is well timbered for fuel, shelter and building purposes, there being both cottonwood and pine timber; cottonwood along nearly all the streams, and pine along the Missouri river breaks. There is also considerable soft coal all over the county.

Coming into the county from the west on the Great Northern railway, which runs east and west through the entire length of the county, the first town is Malta, next to the largest town in the county for population and business. Here during the summer last past was shipped 18,000 beef cattle, 20,000 mutton sheep, 1,000,000 pounds of wool and 175,000 sheep were shorn by two sheep-shearing plants. During the early summer there is a great amount of business done here.

Saco, the next town east of Malta, stands on the open prairie and does a nice business, which is nearly all ranch trade, with the many, but prosperous cattlemen and sheepmen living in the vicinity. Around the town is one of the largest hay-producing bottoms in the county. Beaver creek and Larb creek water thousands of acres of land, on which fine hay is raised.

Hinsdale is located on the bank of Milk river, and just across this river is Rock creek, one of the best streams in the county. Considerable effort has been made and is being made to settle up the bottom along this creek, and to put in a dam for the irrigation of farms, and a great many good solid farmers and stockmen have settled in that vicinity lately.

Glasgow, the county seat, is situated on the Milk river, and is the largest town in the county, and is a freight division on the Great Northern railway. This is one of the oldest railroad towns in the county, but has only in the past year or two started to grow and improve. It now has two large hotels, round-house and railway shops, court house and jail, fine school building and school, three churches, Methodist, Catholic and Episcopalian, a jewelry store, etc. One of Glasgow's stores is as fine a building and contains as fine a stock as can be seen in any town a dozen times its size, and bank, court house, jail, school house, and our hotel are buildings that would do credit to any town. The depot is one of the best the railway company has on its line, outside of the cities. The surrounding county is settling up with cattle and sheep men.

Other towns are Culbertson, Nashua and lesser places, all local supply and stock-shipping points.

Valley county has room for thousands of industrious men, and will welcome cordially all who seek a home within her borders. The climate is healthy and vigorous, the resources are abundant, and there is no reason why a man should fail who labors industriously and energetically for success.

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Assessed Valuations.

Real, \$1,741,515; personal, \$1,795,122; railroads, \$510,120; total, \$4,046,757.

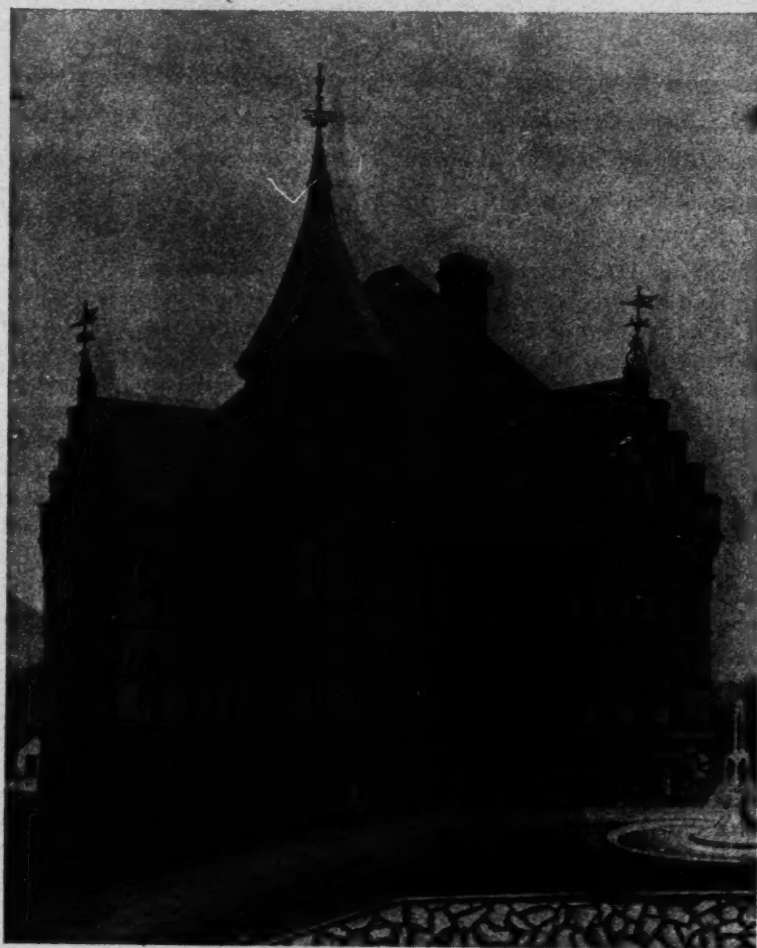
Beaverhead County and its Resources.

A Picturesque District That Is Overflowing With Natural Resources—Gold, Silver, Lead, Copper and Gold Placer and Dredging. Agriculture and Stock Raising Produce Abundant Wealth, and Assure the Future Prosperity of the County.

Among the many attractive towns and cities of the state that are nestled among the mountain gulches and valleys, there are none more picturesque, or placed in better environments than Dillon, the county seat of Beaverhead. This section of Montana has an early and interesting history, coming with the first placer hunters, but space will not permit a wandering in that period of romance. Dillon is located very nearly in the center of the county, and has a population of over fifteen hundred. It is especially prosperous and wide awake, and has secured to itself the exclusive trade of the country for a radius of nearly seventy-five miles. The people of Dillon are contented, happy and prosperous. They are possessed of more than ordinarily good dispositions, because, no doubt, of the conditions that obtain—a temperate climate, a clear sky and a pure atmosphere, scented with the varied emanations of the pines and the beautiful wild flowers of the grand old Rockies. There are valleys in the mountains that are surrounded by more rugged and picturesque mountain scenery than the Beaverhead valley, but none that more satisfying to persons who have lived here for a few years, and become accustomed to the grand and imposing mountain ranges which encompass it. Here in this fertile valley, rivaling in its productive capabilities any valley in the west, is the place where Destiny seems to have intended that a prosperous inland city should be built. It is not surprising that Dillon, the capital city of Beaverhead county, should lead. Civilization, agriculture and commerce joined hands, and their joint works are now visible on every hand. The town has passed the period of small and cheap structures, and in their places are the most modern and attractive residences, and the business houses, are substantial structures that would do credit to cities many times its size. Dillon is noted as a "beauty spot," and in its building a polish has been added to the accomplishments of nature. For six months in the year the ditches on either side of the roadways of the city are filled with water, and thousands of trees draw sustenance therefrom and spread their leafy branches in grateful and appreciated shade across the sidewalks. The ditches also furnish water for the numerous and well kept lawns.

No experience can be more delightful than the summer months spent in this charming little city. While at midday the heat sometimes becomes oppressive, the nights are always cool and refreshing, and sleep is always obtainable, no matter how torrid the day may have been. The winters, on the other hand, are deprived of many of the disagreeable features of this season experienced in the lower eastern climates.

The State Normal School is domiciled in one of the finest educational



STATE NORMAL SCHOOL—DILLON.

edifices of the west, and is attracting many new and desirable residents as well as temporary patrons.

Beaverhead is one of the oldest settled counties in the state, and has an area of 4,600 square miles. The greater part of the county is covered by mountains and foothills. The mountains are covered with a heavy growth of timber, and the foothills afford excellent pasturage. The county is well



A BUSINESS STREET IN DILLON.



BIRDSEYE VIEW OF DILLON.

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watered. The principal streams are the Beaverhead, Big Hole, Red Rock and Blacktail, and their tributaries. It is along these streams that the fertile valleys lie. The soil in these valleys is a sandy loam, from one to eight feet deep. Farming and stock-raising are the principal resources of the county, aside from mining. The realty assessment of the county is \$1,741,515, the personal \$1,795,122, railroads \$510,120, a total valuation of \$4,046,757. The lands of the county require irrigation, but when watered produce most abundantly. There are still some public lands in the Big Hole district, and on some of the other valleys where water can be diverted, but most of the land of this character has been taken up. There are some excellent locations for reservoirs and canals where considerable areas of fertile lands can be supplied with water. In most cases the cost of building these reservoirs and canals is beyond the reach of indi-



DILLON HIGH SCHOOL.

vidual settlers, and they can only be built by co-operative or public effort. Improved lands with water rights can be purchased for from \$12 to \$75 per acre. The tillable valleys in Beaverhead are generally narrow, but grazing lands on the public domain is convenient to most of the farming districts, and many farmers are adding flocks of sheep and herds of cattle to their possessions. The principal crops grown are oats, barley, potatoes, timothy and alfalfa. Owing to the altitude, which ranges above 6,000 feet, only the smaller fruits are grown. A market for the surplus product is found in the mining districts of Butte and Anaconda. There are large mineral areas in this county, but in only a few places has sufficient work been done to develop paying properties. The minerals produced are gold, silver, copper and lead. The mines and reduction works of the Hecla Consolidated Mining company are located at Glendale, near Melrose. Much attention has lately been given to placer mining by means of dredges, and proven successful. The population of the county is 5,615.

The Utah and Northern provides ample rail communication with the country both north and south.

Fergus County.

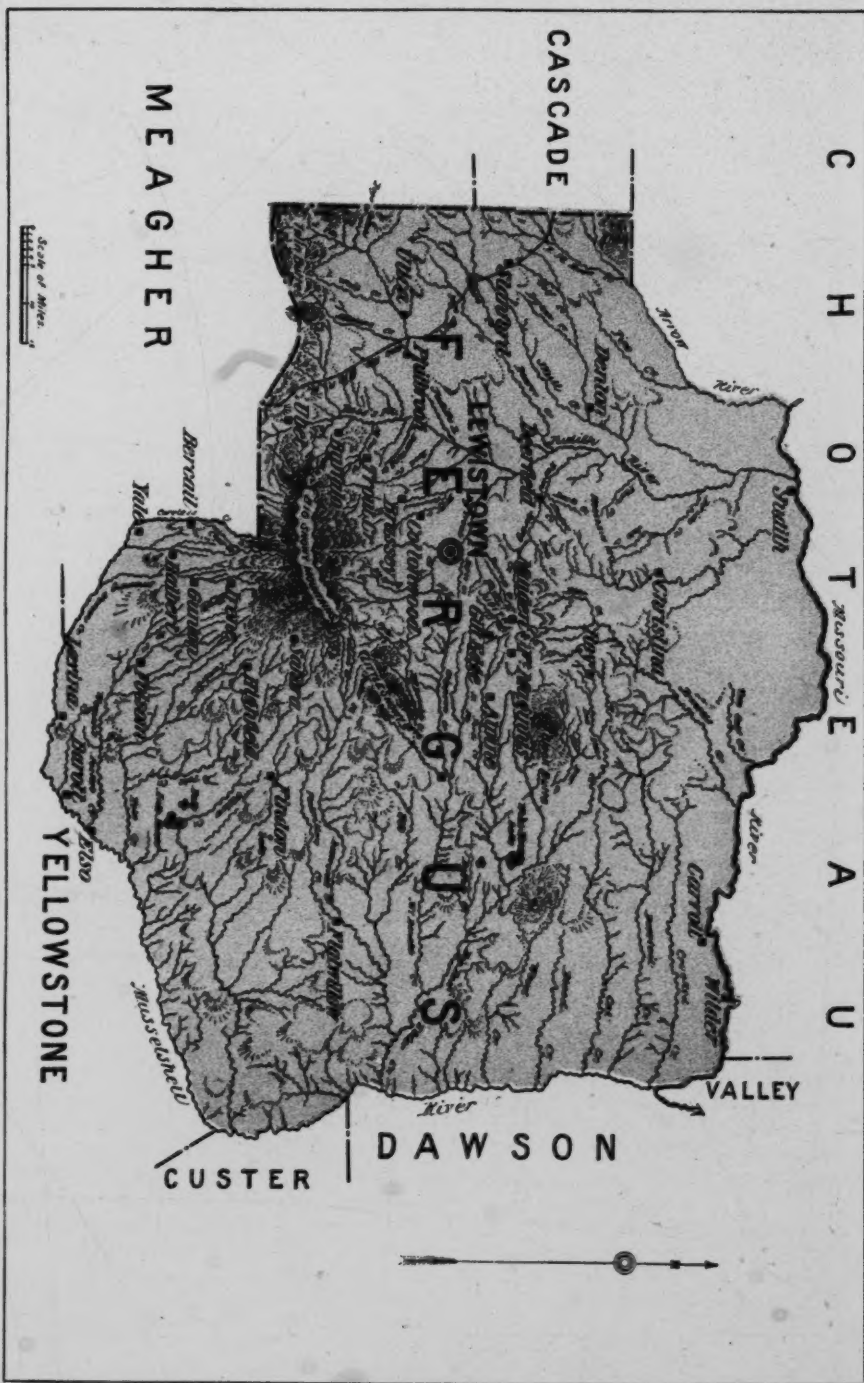
Ranching, Farming and Mining Contribute to Make Fergus County the Most Prosperous of Counties.

Fergus county is very nearly in the center of the state, and has an area of 6,762 square miles, with an assessed realty of \$2,108,905, personal property to the amount of \$3,352,567, making a total of \$5,358,874 of assessed valuations. The population of the county is 6,937. In outline the county is nearly octagonal, except that there is a re-entrant angle in place of the southwest side. The northwestern boundary is formed by Arrow river, the northern and northeastern boundaries by the Missouri, the southern and eastern by the Musselshell. On the west the boundary is artificial, though it follows the ridge of the Belt mountains. The diameter of the county north and south is 110 miles, and the length of the county east and west is 125 miles.

It is doubtful if any region of equal area in the world has more varied resources than Fergus county, with its mountains, bench and valleys, its depth and richness of soil, with its crystal mountain streams and broad, majestic rivers, with forests crowning its hills, and precious metals locked in the rock-ribbed sides of its mountains, Fergus county is a land of plenty of which one is entitled to boast.

From the southwestern side, and reaching almost to the center of the county, extend the picturesque range of Big Snowy mountains, and trending northward from the Snowies are the detached spurs known as the Judith and the North and South Moccasins. These divide the county into nearly equal portions, the famous Judith basin to the west and northwest, and the vast country drained by the Musselshell lying to the east and southeast. These mountain spurs seem one vast mass of low-grade gold, silver, copper and lead ores, with here and there a ganglion of dazzling richness, as in the case of the Gilt Edge, New Year and Spotted Horse, from the last of which \$2,500,000 has been taken. Many tons of this ore have been hauled in wagons to the smelters at Great Falls, a distance of 150 miles, and yielded enormous profits. During the past two or three years, since cyaniding gold ores of low grade has proved such a success, Gilt Edge has developed into a prominent gold-producer. In the vicinity and of a large area about it and to the south, there are great deposits of gold ores that will eventually produce many millions of the precious metal, and now offer capital the safest of investment in establishing cyanide plants and working the inexhaustible gold bodies that are to be had for the taking. There are also many lead, silver and copper properties that will become producers as soon as railway facilities are secured, and that will not be in a distant future.

An excellent quality of coal is found at various places in these mountains. The McDonald Creek mine has been worked more than any other. This



Assessed Valuations.

Real, \$2,108,905; personal, \$3,352,567; total, \$5,358,784.

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industry is as yet, however, comparatively undeveloped. The numerous mountain streams of this central portion furnish many opportunities for the economical improvement of water-powers, and these will some day be an important factor in inducing the establishment of manufacturing industries, and they also furnish abundant and easily diverted water for irrigation of the fertile contiguous lands. The Lewistown flour mills, electric lighting plant and brewery receive their motive power from the east fork of the Judith river, an electric plant that receives its motive power for generating from the river. Lumber is manufactured in various portions of the county. No other industry is developing more rapidly than agriculture. Wheat, oats, rye and barley, timothy and all kinds of vegetables are produced in abundance. In many of the valleys and on the bench lands at the foot of the Snowies, no irrigation is required, but in all parts of the county the rich black loam produces the more abundantly when irrigated.

The first industry to be developed in the county was cattle raising, and is now second in importance to wool-growing, in the latter of which this county is the first in the state. The wool product of this year was some four million pounds, and the number of sheep and cattle ranged make the county rank as one of the first wool and mutton and beef counties of the state. Large areas of the county, such as the Judith basin, are devoted to agriculture, and this line of industry is far in advance of many other counties of the state. The agriculturists of Fergus county are rated among the most prosperous in the state.

Lewistown, the county seat, is the largest town in the state not on a railroad. Its population is 1,200. It has three large churches, two first-class hotels, two excellent newspapers, two banks, a free library, United States land office and all the other business institutions of a live and progressive town. Lewistown is the county seat, and has a court house that cost \$7,000, and a new public building erected at a cost of \$15,000. Eight teachers are employed in the public schools. There is a tri-weekly stage service to Fort Benton, a distance of 100 miles, time fourteen hours; and a daily stage service to Great Falls, 120 miles, time twenty-five hours; and another daily line to Leadboro, a distance of 90 miles, twenty-two hours; and to Billings, 140 miles, time two days. There is a long-distance telephone communication with Great Falls, Billings and all outside points. The freighting of wool to Great Falls and merchandise on the return trip provides profitable employment for a large number of teams and men.

Stanford, Philbrook and Utica are villages on the stage road between Lewistown and Great Falls. Utica has a population of 150, and receives a large trade from the surrounding agricultural and grazing country. Ubet is a small village in the "Gap" between Belt and the Big Snowy mountains. Gilt Edge is a busy gold camp sixteen miles east of Lewistown. Its population is about 250, and is steadily increasing. Maiden is another gold camp where there are several good properties that give great promise for the future. There are other villages in different parts of the county that are the local market points for their respective neighborhoods.

The streams of Fergus county abound in fish, the forest and prairies in game, and the scenery in the mountains and valleys is lovely beyond description.

The only hindrance to the full development of the diversified industries and the many resources of the county is the lack of railway facilities, but it is certain that the next year will remove this obstacle. Then Fergus county will take front rank among the counties of the state.

Dawson County.

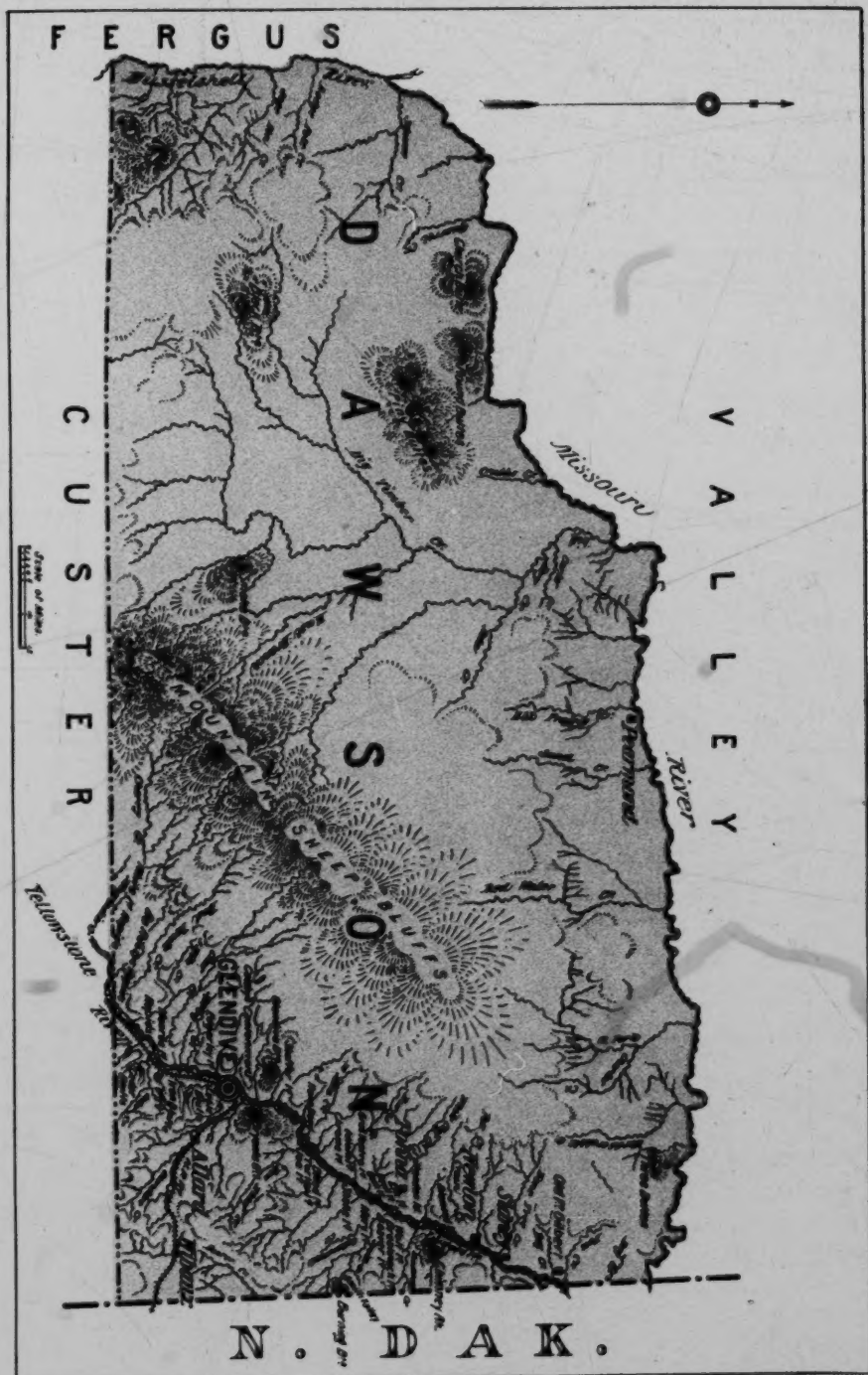
One of the Largest Counties of the State That Produces Annually Great Values in Cattle, Sheep and Horses.

Dawson, one of the prairie counties of the state, has an area of 13,194 square miles, and a total assessment of \$2,549,933, divided as follows: Realty,



BIRDSEYE VIEW OF GLENDIVE.

\$506,307; personal property, \$1,679,492; railways, \$363,480. The population of the county is 2,443. The entire area of the county is especially adapted to stock-raising. The vast ranges with their succulent grasses, and numerous valleys, sheltered from the storms by the many hills, makes an ideal range for stock of all kinds. For the first fifteen years of its existence, the large companies had the ranges well filled, but for the past several years smaller outfits have been locating in the country, and the small stock-grower, who carries on diversified farming, will in the future be king in Dawson county. The numerous large and small valleys lie at a lower elevation, have a higher



Assessed Valuations.

Real, \$506,307; personal, \$1,679,492; railroads, \$363,480; total, \$2,549,933.

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temperature than any other part of the state, are well watered by creeks and springs, and are capable of producing all the crops of hay, grain and fruits adapted to the latitude and altitude. Almost the entire farming lands require irrigation, but some bottom lands along the Yellowstone have been cultivated without, but without irrigation farming is very successfully carried on, and with artificial watering thousands of acres now unprofitable could be made productive and splendid markets found within easy reach. Irrigation is as yet in its infancy, but where tried splendid results have been obtained. The Yellowstone furnishes abundant water for that purpose, and by the diversion



THE DAWSON COUNTY COURT HOUSE.

of its waters large areas of land in the valley can be brought under contemplation. Oats have yielded as high as fifty bushels to the acre, while wheat, corn and barley are equal in yield to the best anywhere, and the lack of shipping facilities is the only reason why they are not more extensively raised. As an agricultural district, the lower Yellowstone valley is largely undeveloped. Enough settlers have been engaged for the past ten years in crop-raising for profit to demonstrate that it is no longer a theory, but a well established fact that the valley returns a far more bountiful yield, in proportion to the cost of production, than any of the so-called agricultural belt states. All the farming lands in the county have large and excellent stock ranges adjacent, and combined stock-raising and farming is destined to be the basis of the

future prosperity of the county. The Northern Pacific railroad has sixty-three miles of road in the county. The Great Northern also skirts along the northern boundary of the county for a long distance. Improved lands with water rights are held at \$20 to \$30 per acre. Eleven school districts are established in the county, and all of the schools are in a prosperous condition, with every modern equipment requisite to the best methods of instruction. The affairs of the county are wisely and economically managed, and county warrants in all funds are at par.

Nestling in a natural amphitheatre, surrounded on almost every side by picturesquely rugged hills, through which the broad, majestic Yellowstone river sweeps its way, the charming little city of Glendive appears to the wearied traveler from east or west like a veritable oasis. In its miniature valley location, the famous river skirts the western limits of the town, and presents a feature of interesting change with the seasons of the year. From the banks



A GLENDIVE SCHOOL HOUSE.

of the stream, and extending almost to the boundaries of the abruptly towering bluffs, the broad streets and avenues of the town are laid out to the compass' cardinal points. Parallelling the main street, or more correctly, Merrill avenue, the Northern Pacific railroad lines are laid, and east and west the prospect is beautified by well-kept homes dotting here and there in the immediate distance, field upon field of emerald green. It is a delightful place to spend the summer months, and in the region around, game of many kinds abound. The habiliments of the town are numerous, and the public edifices would do credit to any place quadruple its size. Glendive has had a sure and stable growth, untarnished by the deceptive influences of boom methods, and its first settlers who came early in 1880, as also those that followed, were nothing if not practical. Glendive continued to grow, and handsome houses speedily took the place of frontier tents and log shacks, until today there is no more substantially built and neatly kept town of its size anywhere.

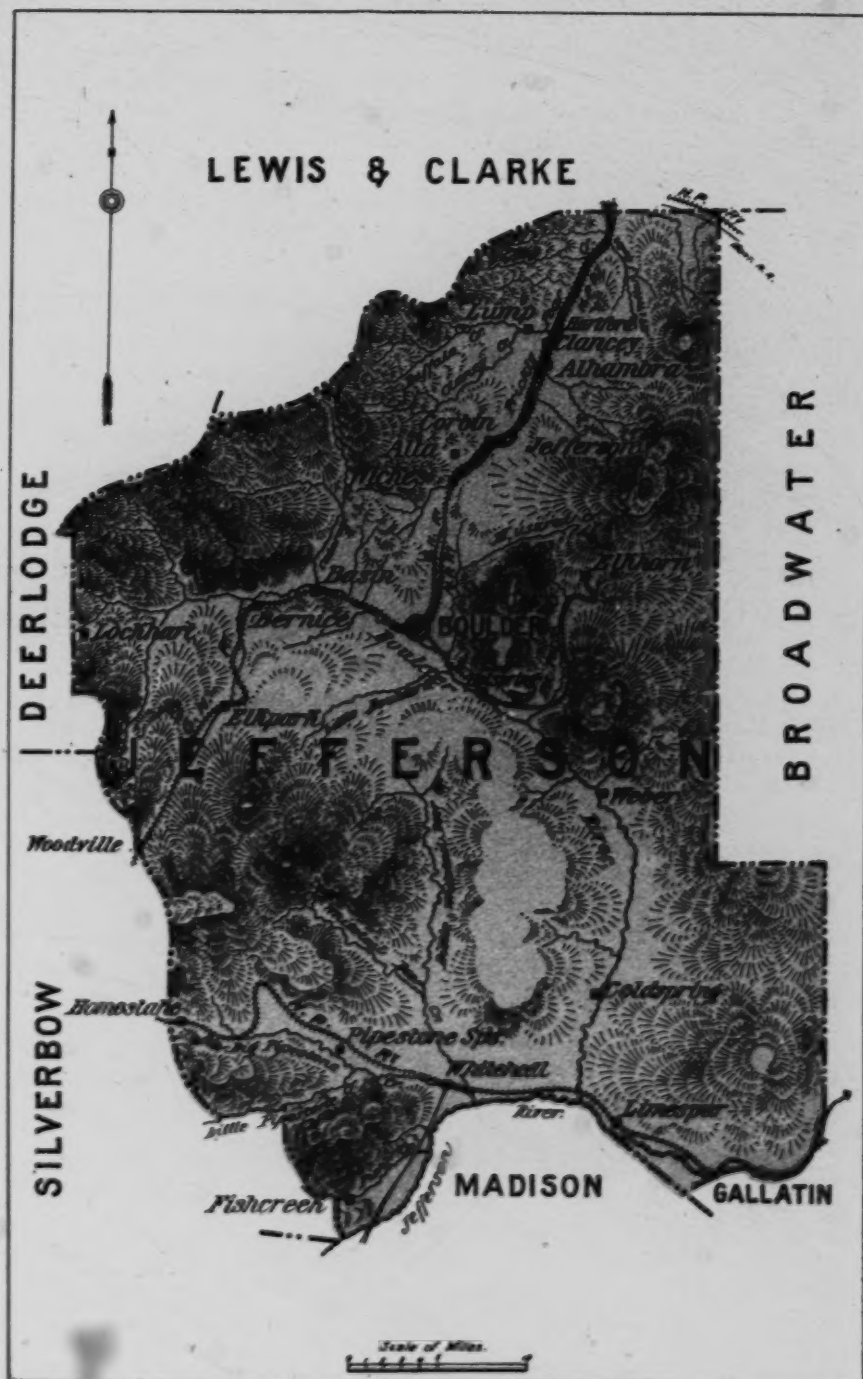
Along the entire length of Merrill avenue, attractive brick stores and spacious frame business houses rear their heads in undeniable testimony to the city's commercial prosperity, while the aesthetic taste and culture of the people find expression in the artistic arrangement of their homes in well-kept lawns and trees and flowers. This pearl of the Yellowstone is not only attractive to the eye, but its location in the midst of a vast surrounding stock country, extending scores of miles in every direction, makes it a place of great commercial importance. The importance of the place has been enhanced by the location of the large machine shops, division headquarters and round-house of the Northern Pacific railway, all of which give employment to many of its citizens. Its educational and religious facilities are excellent, splendid schools and churches being appreciated to the utmost, testifying also to the morality and high standard of the population. Social, literary and fraternal societies are in a flourishing condition, while the public conveniences of the town are unexcelled. Glendive is essentially a residence city. There are no manufacturing at present established within its limits, but the interests of the people extend throughout the county, in sheep, cattle and land investment, and as Glendive is the distributing point for the entire region, it is natural that it should be the permanent residence seat of the county.

Jefferson County.

Mining and Agriculture—Much Undeveloped Mineral Area That Will Eventually Make Jefferson One of the Richest of Counties.

Jefferson county has an area of 1,600 square miles, and the greater part of this is mineral land. The realty assessment of the county is \$1,883,773, personal property \$950,487, railways \$837,076, making a total of \$3,671,336. The population of the county is 5,330.

A very considerable portion of the county is mountainous, but it has a number of fine agricultural valleys which are very productive, and located as they are adjacent to the mining districts, the farmers find a ready cash market. The county also contains a considerable area of good grazing lands. The principal valleys are the Boulder, Jefferson and the Prickly Pear. Their altitude is generally from 4,000 to 5,000 feet. All agricultural lands require irrigation, and the available waters are generally appropriated. The soil is a black sandy loam, ranging from a few inches to four feet in depth. Wheat, oats, barley, potatoes and all root crops, grasses and vegetables are grown abundantly, and small fruits are grown in all the valleys. Timber for fuel and fencing is usually obtained at four to ten miles from the farms. In some parts there are excellent stock ranges convenient to the farms, but as much of the natural shelter is fenced in, the stock is limited to the number that can be sheltered and fed on the farms when the severest weather makes it necessary. Garden farming near the mining camps is a highly profitable industry. Some hay and grain is shipped to Helena. The area of cultivated lands could be increased with a storage system for water. Fairly improved farms with water rights can be bought in the different valleys at \$12 to \$25 per acre. The principal industry of the county, however, is mining for the gold and silver of which this county is a great producer. This is one of the very best counties to prospect in, from the fact that the veins of mineral are easily discovered, and when developed are great producers. In this county, as in all mining districts, the poverty of the prospectors has delayed the development of the mines, but in the last two or three years the attention of capitalists has been successfully directed to the rich veins of ore that await the investment of capital, and the application of labor to return rich rewards, and as a consequence many paying properties are now working. During the last year prospects around Basin have been developed into mines, and the field has hardly been touched. There are few places where there is such an inviting field for the investment of capital in the mining industry, as in the district



Assessed Valuations.

Real, \$1,883,773; personal, \$950,487; railroads, \$837,076; total, \$3,671,336.

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surrounding Basin. Another old mining camp that is being once more brought into prominence as a producer is Lump Gulch. Much work was done in this camp in the earlier days of the state, and a very considerable amount of money was taken out, but owing to the expensive methods of treatment for the ore, the mines were closed down. Now, with modern and cheaper methods, these mines are again pouring their wealth into the channels of trade. Other mining places are Elkhorn, Whitehall, Corbin and Wickes. Copper and lead are also important productions of this county. There are in the county some large bodies of low-grade ore that it is thought can be worked at a large profit, if the work is done on a sufficiently large scale. The mining camps of this county are prosperous, and support thousands of people, and there is room for thousands more. Men with money can find no better place to invest it profitably than in the mining districts of Jefferson county.

Several of the mineral districts of the county that have been considerably developed, and have proved to have rich and permanent mines, have been prevented from producing by the fact that the ores, while rich in precious metals, carried a large percentage of zinc, and the penalties imposed by the smelters for handling such ores has prevented their operation. There is now good promise that this obstacle is to be removed in the very near future, for the county is to have a smelter constructed for reducing zinc ores, and after it is in operation, instead of having the zinc bring the mine owner a penalty, it will add to the value of his ores. As soon as this plant is put in operation, and mining assurances are that it will not be later than the last of the coming year, mining in the zinc districts will experience a great boom, and the developed mines will be worked to their full capacity, and many new properties will be speedily developed.

Boulder, the county seat, is situated in the Boulder valley, and may be reached by the line of the Great Northern railway, or by the Northern Pacific railway from Helena. The population of Boulder is about 1,200. This little city has a fine court house, good schools, numerous churches, and the State Deaf and Dumb School. The famous Boulder Hot Springs are here, with ample and excellent hotel and bathing accommodations. There are also hot springs at Alhambra and at Pipestone, to which many resort for health and pleasure.

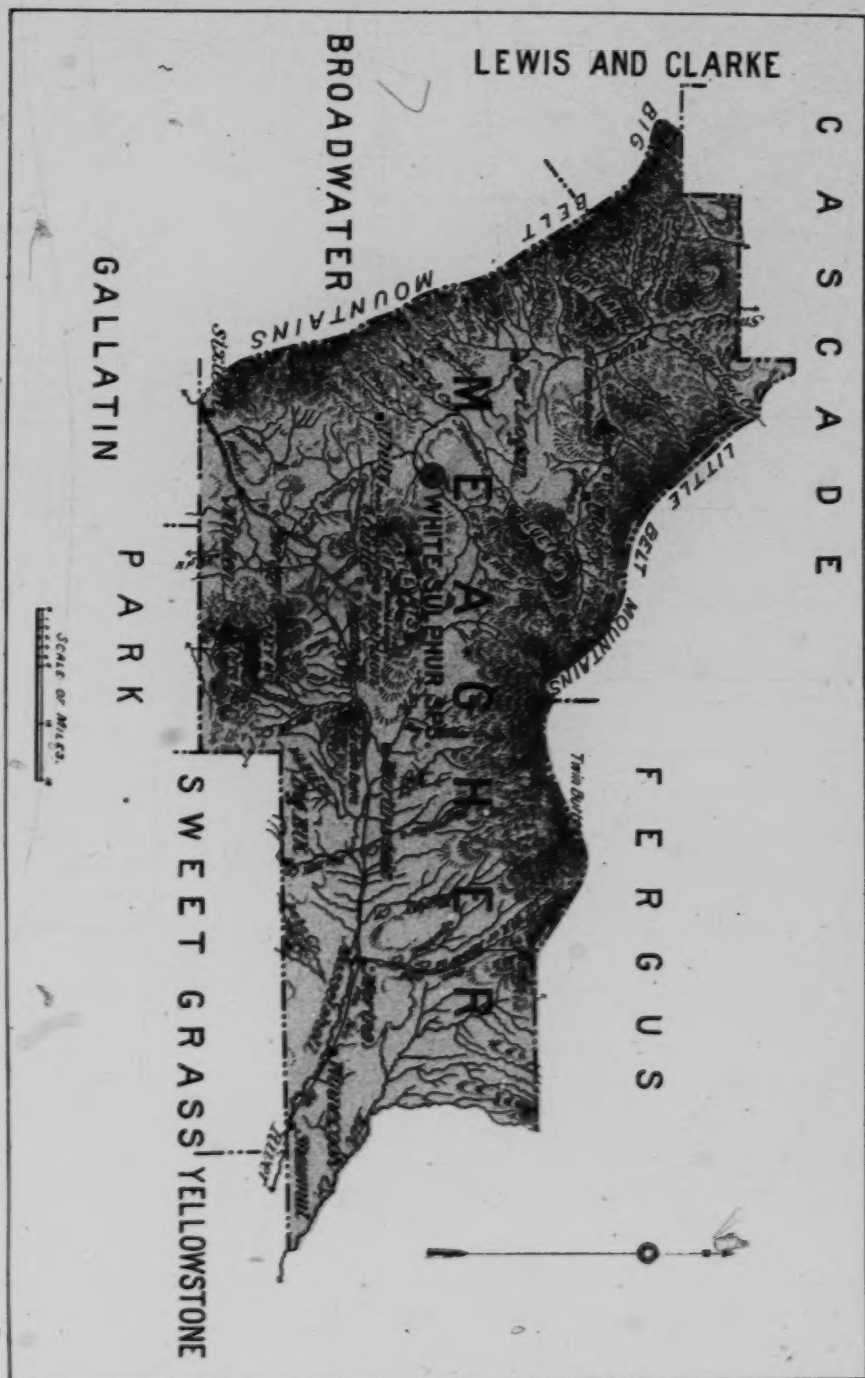
There are good schools in every locality, and good opportunities for small industries in some of the towns.

Meagher County ' ' ' and its Resources.

**Agriculture, Stock and Mining the Resources That Make This One of the
Richest and Best Sections of the State.**

Meagher county was named in honor of Thomas F. Meagher, who was for some years secretary of the territory of Montana. This county had originally about 10,000 square miles, but its rich valleys and thriving towns tempted men to seek its division, until now it has about 2,500 square miles, giving a total acreage of 2,650,000. The realty assessment for the year was \$1,376,740, personal property \$1,882,810, and railways \$56,064, making a total of \$3,315,614. The population of the county according to the present government census, is 2,526. In proportion to its area no region in the state produces more grass and hay, and consequently can support, as it does, a great number of cattle and sheep. The wool, mutton and beef output is greater in proportion to its area than other sections, and there is no stock district where the winter feed problem has been so successfully and easily solved. Although it is a district of big flocks and herds, every animal is provided with enclosure and ample hay for winter. Meagher is also a good grain-growing region, and blue joint meadows are secured wherever water can be secured for irrigation. The cultivation of alfalfa has been increasing rapidly the past few years, and is proving a cheap and abundant provender for winter. There is no finer or more productive rural region on the continent, and this is made evident by the per capita property valuation. The principal valleys are the Smith River and Musselshell. The soil is generally a sandy loam from seven inches to seven feet in depth, and produces abundant crops of all grains, grasses and vegetables. A portion of Meagher county is the oldest habitation of the white man known in the Rocky Mountain region, and owing to its health-giving mineral waters and its salubrious climate is now and always has been a favorite with the homeseeker, and as a consequence the land is well settled by an industrious, prosperous and intelligent people.

The county was once famous for its rich placer fields, and it now bids fair to become equally famous for its quartz mines. Owing to its lack of transportation facilities, little was done in the way of developing its mineral deposits until the past year or two, when the construction of the Montana Midland brought its mountainous districts into easy communication with outside distributing points. The district known as the Smith River water-



Assessed Valuations.

Real, \$1,376,740; personal, \$1,882,810; railroads, \$56,064; total, \$3,315,614.

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shed bids fair to become a rival of Butte in the production of copper, and will also have as important products gold, silver, lead and iron. But aside from this district there are other portions of the county that are rich in deposits of the different minerals, and there are several large districts that have almost unlimited deposits of low-grade cyanide gold ore that within the next few years will develop into a richly productive industry. All through these mineral districts are many opportunities for the most economical development of water powers. Near White Sulphur Springs an iron mine is being opened, and will be operated extensively during the coming season, that is capable of producing all the iron that the state can consume for some time to come. Portions of Meagher county contain great coal measures, and there is an abundance of the finest building stones. Game abounds in the mountains of the Smith river, and the streams afford the best fishing. The breezes of the summer are delightfully cool, and the winds of the winter dissipate the snow and moderate the temperature.

The county, taken as a whole, is the most prolific and reliable in its resources, and in the past its people have been among the most prosperous and contented in the state, and with its topography warranting the best of future transportation facilities, and the consequent development of its resources, it will of necessity become one of the counties of which prosperous Montana will feel especially proud.

White Sulphur Springs, the county seat and the location of the noted springs, is the business center and the distributing point for the county, is lighted with electricity, owns its own waterworks system, and is not only a lively business point, but is one of the most congenial resident localities of the state.

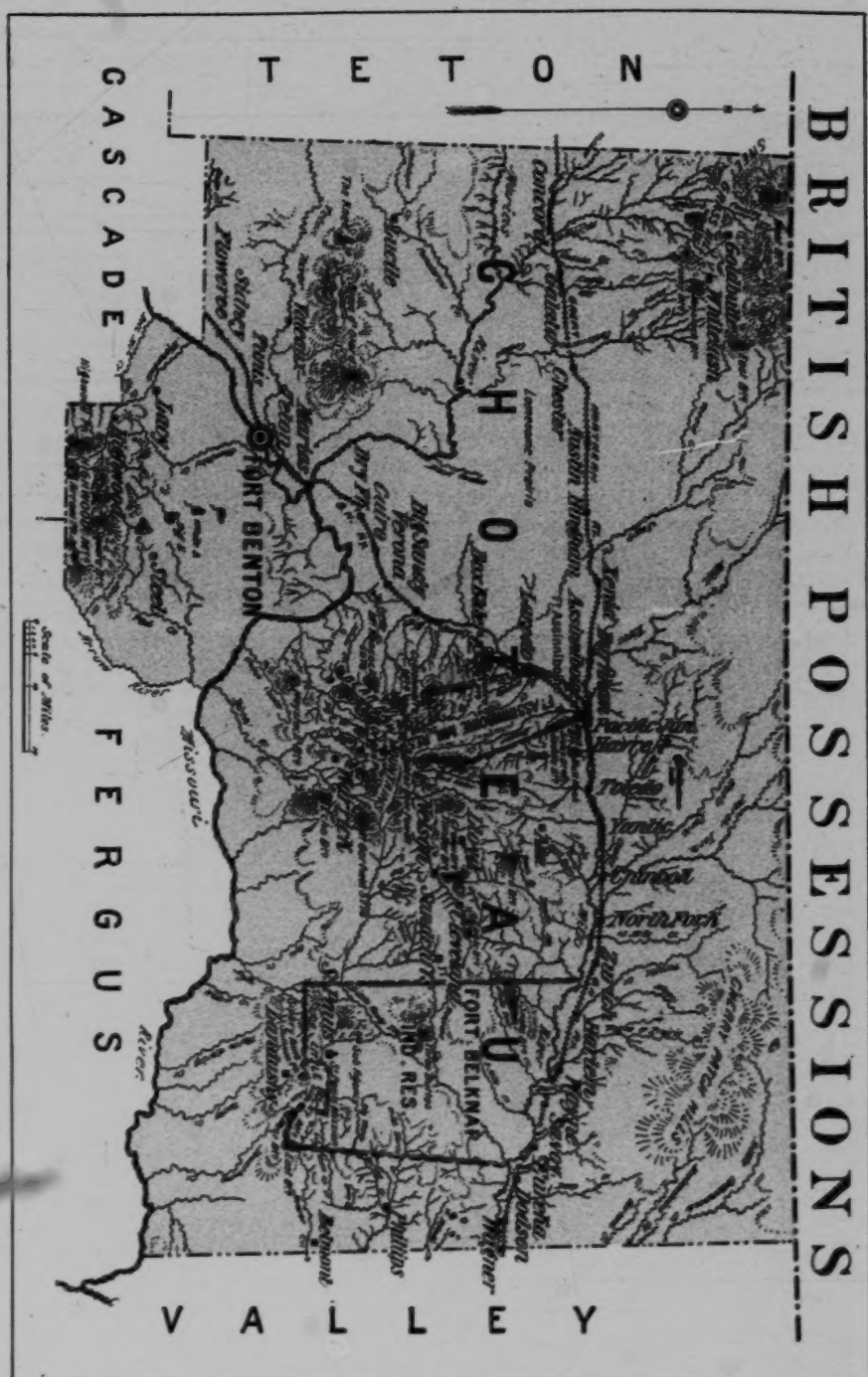
Choteau County.

Choteau Is One of the Largest Counties in the State, and Also One of the Chief Cattle and Sheep Producing Districts—Large Agricultural Area.

Choteau county, named in honor of Pierre Choteau, the noted early-day explorer and trader, is one of the largest counties in the state, having an area of 14,835 square miles, with a total assessed valuation of \$6,314,794, divided in this way: Realty, \$1,181,951; personal property, \$3,689,523; railways, \$1,442,819. The population of the county is 10,996. Topographically the county is composed of valleys and undulating plains, with the Bear Paw mountains rising near the center, and the Sweet Grass hills in the northwest. This county is well watered by the numerous rivers and streams that flow through it. The principal river is the Missouri, and the streams the Marais, Milk river, Teton and their tributaries. Wide and fertile valleys lie along these streams. The soil varies from a sandy black loam on the uplands and near the mountains to a still clay soil in the bottoms, the depth of which ranges from a few inches to four or five feet. Irrigation is necessary to cultivation of the soil, and so far water has only been diverted on a small portion of the land, but the soil is naturally very productive. The farm areas range from 2,500 to 5,000 feet elevation. Wheat, oats, barley, rye and all the grasses and root crops do exceedingly well, and in some places corn is raised. Fairly improved farms with water rights sell for \$10 per acre and upward. Lumber sells from \$10 to \$20 per thousand. Water is obtained at a depth of from ten to forty feet. There are two large irrigating canals in this county, but all the lands covered have been disposed of. There is yet abundance of unappropriated water. Good inducements are offered to settlers where irrigated farms can be secured and operated in connection with stock-growing. But stock-growing is the principal industry in the county. The larger part of the county is grazing land, and more than 150,000 head of cattle and more than half a million head of sheep range and fatten on the rich and nutritious grasses that cover the uplands.

There are some gold mining claims on the Sweet Grass hills, but they have not been sufficiently developed to determine their value.

Fort Benton, the county seat, is situated on the line of the Great Northern railway and is at the head of navigation on the Missouri river. Before the advent of the railroads in the state this was the great distributing point of Montana. It contains a population of 600, and has a municipal system of waterworks, good schools, churches and the fraternal societies are well represented. The other principal towns in the county are Chinook, the center of



Assessed Valuations.

Real, \$1,181,951; personal, \$3,689,523; railroads \$1,442,819; total, \$6,314,794.

the great sheep-raising district, with a population of 500, and Havre, the junction of the Montana Central and the main line of the Great Northern railway, a growing and thriving town of 500.

While Choteau county does not present the diversified resources of some of the other counties of the state, its future is both promising and assured. Though little development work has been done in the Sweet Grass hills, enough has been done to prove the existence of rich gold and copper deposits and extensive measures of coal that equal the noted Lethbridge product. The gold mines of the Little Rockies are also showing up well. But much the larger part of the county's great area will always be devoted to stock-grazing, and in this industry the county will always rank prominently. As will have been noted, the county now contains thousands of head of cattle, horses and sheep, but its ranges, with their abundance of nutritious grasses, will support many additional thousands, and those seeking locations for stock-raising in any of its branches, should look over the opportunities offered by Choteau county. The county embraces the area of a good sized state, and its present population and assessed acreage show the opportunities open for those who may be seeking remunerative stock-raising locations.

The county will always occupy a prominent position in the history of the state, as its county seat was during all the years of its territorial existence, the commercial center and distributing point for hundreds of miles north, west and south, all merchandise for this great area being brought to Benton, the head of navigation, with the now almost forgotten Missouri steamboat.

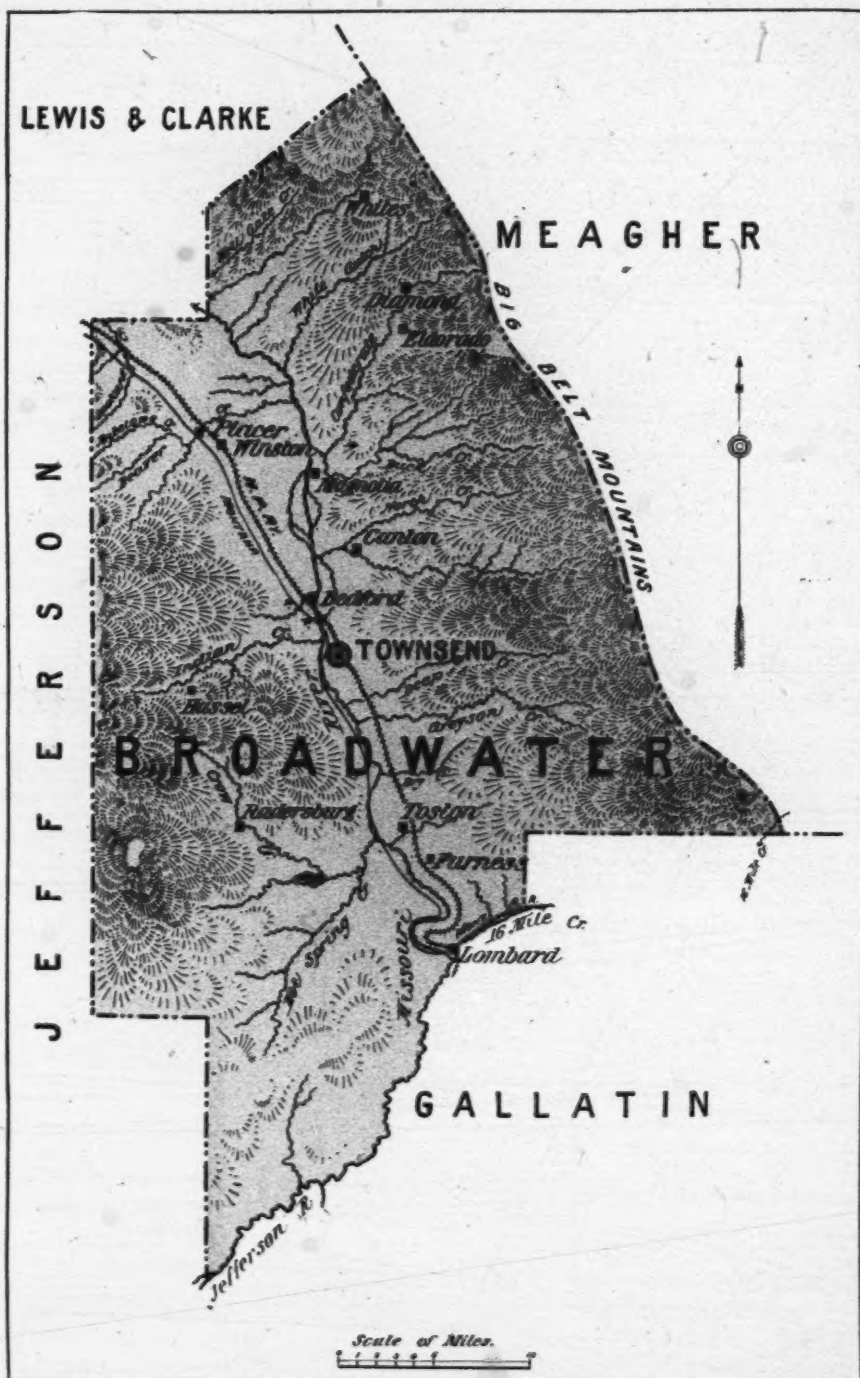
Broadwater County.

Broad Agricultural Valleys and Prosperous Mining Camps, Producing Gold, Silver and Lead.

Broadwater county, named in commemoration of the memory of Colonel Broadwater, whose name will have a prominent place in the pages of the history of Montana's progress. The area of the county is about 975 square miles, with a realty assessment for 1900 of \$981,646, personal property \$745,277, railways \$247,010, or a total of \$1,973,933. The population of the county is 2,641. Farming and stock-raising are very profitable in the valleys, and the mining camps at Radersburg, Winston, Hassel and St. Louis furnish employment to many men, and are among the wealth-producing camps of the state. The principal agricultural valleys are the Missouri, with its tributaries. Crow Creek valley on the south is a fine farming country. The soil in the valleys is generally a sandy loam from seven inches to several feet in depth, and produces abundantly all the grasses, grains, vegetables and root crops. The agricultural production in the valleys is limited, but with better railroad facilities and the present revival of the mining industry, will be greatly increased. Small fruits are raised in all the farming districts, and the standard apples, plums and cherries are grown in the Missouri valley. Large quantities of hay are raised and furnishes the winter supply for feeding the stock that grazes on the pasture lands of the county. Good water is found at from twenty to forty feet in depth. Timber for fuel and fencing grows on the mountain sides. The county has two railways, the Northern Pacific and the Montana, which afford it ample transportation facilities. After running through but two miles of Broadwater county, the Montana railway traverses the northern part of Jefferson, and again touches Broadwater at its southeast corner, providing transportation facilities for a considerable portion of the latter county. There are several water ditches already built and covering much of the farming land in the valleys, but there are still large areas that can be brought under cultivation by diverting conveniently abundant water to them.

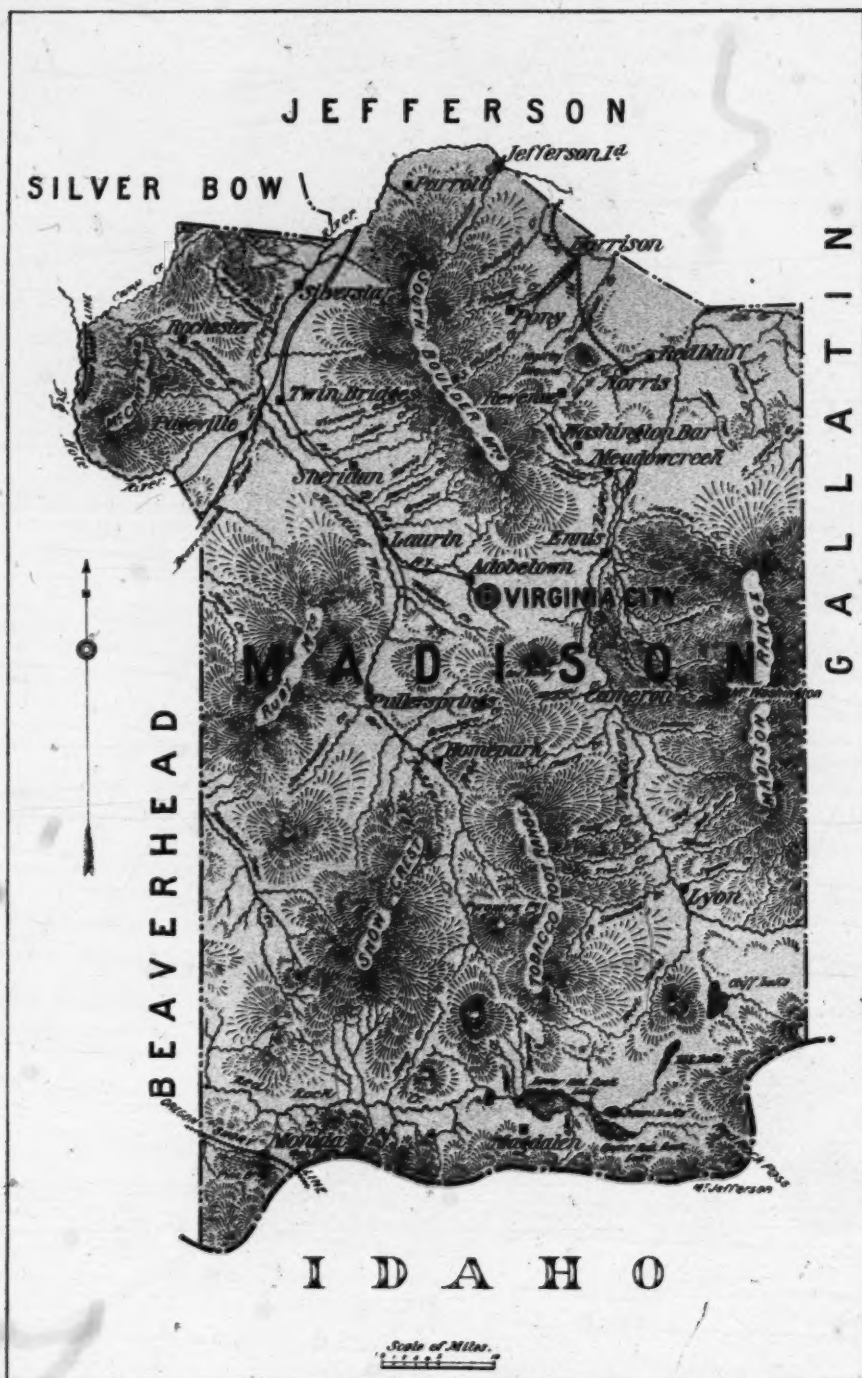
Townsend, the county seat, is beautifully located on the Missouri river on the line of the Northern Pacific railroad, and has a population of 900, and is supplied with an electric lighting system. The town is surrounded by a fertile valley, and is a progressive and growing place. There are public schools, churches, public buildings and everything pertaining to the comfort and happiness and prosperity of the people.

Improved lands can be had for from \$20 to \$75 per acre, according to the nature and quality of the improvements and the state of cultivation.



Assessed Valuations.

Real, \$981,646; personal, \$745,277; railroads, \$247,010; total, \$1,973,933.



Assessed Valuations.

Real, \$1,827,435; personal, \$1,996,807; railroads, \$245,164; total, \$4,069,406.

Madison County.

The Resources of the County Are Mining, Agriculture and Stock Raising.

The area of Madison county is 4,250 square miles, and the realty assessment is \$1,827, 435, the personal \$1,996,807, railways \$245,164, making a total of \$4,069,406. The population of the county is 7,695. Branches of the Northern Pacific railroad reach Norris and Pony, and during 1899 a branch has been built from Whitehall to Twin Bridges, tapping a rich agricultural and mining territory.

The county is about two-thirds mountainous, the remainder large, fertile valleys, bench land and foothills. The valleys are the Ruby, Madison, Willow Creek and Jefferson. The elevation ranges from 4,000 to 6,000 feet; the soil of the bottom lands is generally of a deep black loam, and on the bench lands a sandy loam with clay sub-soil. The soil varies in depth from a few inches to five or six feet. Except in rare instances, the lands require irrigation for successful cultivation, but with irrigation all the grasses, grains, vegetables and root crops grow well. There is a great deal of very fertile land in the county, and small fruits are grown, together with some varieties of the more hardy apples. There are also large areas of pasture lands, and stock-growing is one of the principal industries of the county. Many large herds of cattle and flocks of sheep are pastured, and stock-growing in connection with farming is very successfully carried on. Fairly improved farms with water rights can be purchased at from \$8 to \$35 per acre in nearly all of the valleys. The absence of railroad facilities has prevented the advance in the price of farm lands in proportion to lands of equal fertility and productiveness in other parts of the state, where the opportunities for reaching markets are better. Most of the lands where water can be economically diverted have been taken up, but there are lands on the Madison and Jefferson branches which can be reclaimed by building large irrigating ditches.

Madison county has as great a variety of, and as extensive mineral resources as any county in the state, but the lack of transportation facilities has greatly retarded their development. The railroad extended to Twin Bridges during 1899, however, has largely stimulated the mining industry in the adjacent regions. In the southern part of the county asbestos is found with a length of staple of one to three inches. On Sweetwater creek, on the upper Ruby, cassiterite ore has been found, and at one time caused some excitement, but the per cent of tin contained in the ore would not justify treatment. More economical processes of treatment will some day allow the development of this industry. Placer mining by dredging is carried on at the mouth of Alder

gulch and in a smaller way in other places. A year ago a sixty-stamp mill was erected to treat the ores of the Kennet mine, at the head of Moore's creek, and the company is being reorganized and will work the mine soon on an extensive scale; at Pony a 35-stamp mill, at Richmond Flat 20 stamps, at Red Bluff 10 stamps, and at the Leiter mine 20 stamps are crushing ore; 30 stamps at Rochester, which has become a large camp during the year. The mountains near Sheridan are filled with prospectors, and a large quantity of ore is being shipped to the smelters of Butte and Helena for treatment. In the Mayflower district a number of very rich mines are being worked, and many prospects only await development to prove their value. There is great activity all through the mining districts of Madison county, and each year adds to the number of paying mines. Graphite, mica, building and limestone, fire-clay, lead, zinc, potter's clay and coal are found in paying quantities, as are sapphires, rubies, garnets and moss agates.

Virginia City, the county seat, was formerly the capital of the territory of Montana. It is not reached by any railroad, the nearest point being Twin Bridges on the Northern Pacific, and Morris on the east side, from which points communication is afforded by daily stage lines. Virginia City has a population of 568, and is located in Alder gulch, which was discovered in 1863, and is estimated to have yielded to the present time \$150,000,000 to \$200,000,000 in placer gold. The gulch is seventeen miles long, and was probably the richest gulch ever discovered. Other principal towns in the county are Sheridan, Twin Bridges, Pony and Morris. The State Home for Orphans is located at Twin Bridges. There are large mining interests at Pony and near Sheridan.

Madison county has four banking institutions, and is well supplied with newspapers, the oldest of which is The Madisonian, published at Virginia City, established in 1873. The other newspapers are the Alder Gulch Times, Sheridan Chinook, Monitor at Twin Bridges, and the Pony Sentinel.

With its large area of agricultural land and its vast mineral resources, Madison county is one of the most promising counties in the state.

Agriculture in Montana.

While Much of the Fertile Lands Require Irrigation, Thousands of Square Miles Can Be Tilled With More Than Customary Profit—A Letter on the Subject from Hon. Paris Gibson.

From the fact that the country lying along and east of the Rocky Mountain range, has for generations been credited with being arid, it has become the popular notion that little in the way of agriculture can be made successful in this state without the aid of artificial watering. The fact, is, however, that there are thousands of unirrigated farms in Montana today that are more successful financially than are the farms of more eastern districts that are not rated as being within the arid belt, and there are yet thousands of square miles within the state that are open to location, that can be converted into most profitable farms without the aid of irrigation.

An article published some time ago in one of the papers of the east, asserting the general aridity of the state, brought out the following reply from Hon. Paris Gibson, of Great Falls, who is one of the early founders of successful farming on the unirrigated bench lands. Mr. Gibson was one of the early settlers of the Great Falls district, and is the father of that prominent and thriving city, as well as "a grand old man," and what he says in the following may be taken as absolute fact:

"No man," Mr. Gibson writes, "can be a sincere advocate of the greatest and speediest growth of agriculture in Montana who does not earnestly advocate the creation of a great irrigation system here. No one believes in successful farming upon the largest portion of the lands of the state without irrigation; but there are thousands of square miles of lands in Montana where industrious men can farm successfully without the aid of irrigating ditches.

"It is unfortunate for our agricultural development that there are men in parts of this state who view with alarm the occupation of our lands by farmers, and who make great efforts to discourage pilgrim farmers as soon as they arrive here. They assure these newcomers, first, that there are no lands in Montana upon which they can make a living from farming unless they have irrigating ditches, and then they tell them that whether they can grow crops with or without irrigation they will have no markets for their farm products, and this assertion is made in the face of the fact that we are sending to other states millions of dollars annually for butter, cheese, poultry, eggs, bacon, etc. If you will come across the mountains next summer and go with me over the country between Great Falls and the Belt mountains, I will give you one of my best Holstein cows if you do not admit that the

farmers there are as contented and prosperous as you will find them elsewhere in the state, and I believe without an exception that they are all farming without irrigation. While you are here I will show you from 1,000 to 1,200 square miles of land in Cascade county upon which industrious men, not horseback farmers, can establish homes and become prosperous without the aid of irrigating ditches. Large areas of land similar to these lands in Cascade county are found in Fergus, Choteau and Teton counties, on which excellent crops of grain can be grown, and are being grown without irrigation.

"These lands, of course, would be much more valuable if they could have the benefit of irrigating ditches, but many of them are so situated that they apparently can never be irrigated. Some years the yield of grain from these lands will be small, and occasionally, as in 1890, there will be a complete failure, but the average yield for ten years will be excellent. My crop of hard spring wheat averaged 19½ bushels to the acre in 1897, and 22 bushels in 1898, and, while I have not the figures showing the average yields for the ten years in which I have sown wheat here, they have certainly been very satisfactory during that period. My neighbors higher up on the plateaus have made a better showing than I have, one farmer's wheat crop having averaged about 29 bushels per acre yearly for six years past. Now let us compare this with North and South Dakota averages:

"These states together show averages as follows: Average in 1893, 9 bushels; in 1894, 7 3-10 bushels; in 1895, 15 bushels; in 1896, 11 5-10 bushels.

"It is well to bear in mind that while yields of grain are much larger with than without irrigation, in this state, it costs much more to cultivate an acre of irrigated than non-irrigated land.

"I will state before closing that I grew to manhood on a New England farm, where the land is rocky and sterile to a degree not understood by those who were born in the middle and western states. Not an acre of land of our homestead place could produce even white beans unless it had first been heavily fertilized, and it was necessary that this process of fertilization should be kept up yearly as long as the land was cropped. Under such circumstances the farmer could cultivate only a few acres. Now, these New England farmers by diligence and close management, built pleasant homes, made a good living, educated their sons and daughters, and accumulated millions of money, much of which is loaned out today in cities of the great west and to farmers in the Mississippi valley. If farming could be made a success on the rocky hillsides of New England, what shall we say of the farmers' chances on these rich, non-irrigated highlands that skirt our mountains for hundreds of miles? These lands are only waiting the coming of industrious, intelligent farmers to take their places among the most productive agricultural sections of the country. Our people cannot all be cattle kings, sheep barons and bonanza miners; some of them must occupy more humble but not less honorable positions on the farm lands of our state."

Then to add to the lands described, that may be cultivated without irrigation, there are hundreds of valleys that lie within the confines of the mountain ranges that have the most abundant precipitation of moisture, and where crops are as certain as the regularity with which they are planted. These

locations may be found on both sides of the main range Rockies and among the other mountain branches and ranges.

The Flathead valley that is fully described under the article treating the county of that name, is one of the districts that do not require artificial watering, as the natural precipitation is abundant and certain. Much of Missoula, Ravalli, the valleys of Beaverhead and Madison, of Deer Lodge, Meagher, Cascade, Fergus, Gallatin, Sweet Grass, Yellowstone and Custer also afford opportunities to locate on agricultural lands that can be profitably tilled without the aid of irrigation. In the cultivation of these lands the farmer does not encounter the multitude and variety of risks that are assumed by those who have settled in the Red River valley, or any other wheat district of the several states lying in that belt. Then, too, in all of that country the farmer must endure the penalties and inconveniences of severe and long-continued winters, and his opportunities to combine stock-raising with that of agriculture is restricted by the necessity of having to warmly house and feed all livestock for a continuous period of five months. Contrasted with this unprofitable condition, the farmer of Montana, whether located on non-irrigated or irrigated lands, not only enjoys the pleasures and comforts of bright and warm winter seasons, but is allowed by these conditions to engage as extensively as may be in stock-raising at a large and assured profit, and with comparatively small expense and little effort. After a frost in any of the middle country, the standing grass is converted into dead and valueless straw that entirely lacks any nourishing properties; here the grass is "cured" as it stands, having all the nutrition of the best and strongest hay, and the stock and sheep pasture upon this during the entire winter. There the snows fall in early November, and the temperature drops to an uncomfortable number of degrees below zero, and stays there; here there will be a flurry of snow, and then the warm chinook winds come, and in a few hours the snow is dissipated, the water is running fresh and bright in every little rivulet, and the atmosphere is one of the delightful autumn, instead of the Arctic winter. So the agriculturist of the colder district will appreciate the difference between the climatic conditions that confine him to a short season of work and a long period of practical idleness, and to the protection of little more than the single crop of wheat, and the conditions that prevail here, which allow the agriculturist to widely diversify his soil products, and also offer every attractive inducement to engage in cattle or sheep-raising, and allowing a combination of business that profitably engages his attention during the entire period of every year.

Prof. Emery, for a number of years director of the government agricultural experimental station located at Bozeman, and perhaps better qualified to speak authoritatively on the subject than any other agriculturist, says of the lands that may be tilled without the aid of artificial watering: "I am of the opinion that if the tillable area of Montana, in round numbers about 50,000 square miles (or 32,000,000 acres), were plowed to a depth of 12 inches, the soil perfectly pulverized and this land summer fallowed each alternate season, that without a drop of water being artificially applied to the surface of the earth, and the same care taken in fitting the soil for the reception of seeds

that is practiced in older states, that one year with another, the thirty-two million acres thus tilled would yield better average crops for ten, twenty or a hundred years than would the same areas in Dakota and Minnesota.

"In round numbers, the rainfall of the state averages eighteen inches, or 50 per cent. more than is required for successful crop-production, if applied in the proper season.

"No doubt there would be years when the harvested crop would not return the seed sown, but on the other hand these years would be offset by crops yielding twice or threefold the average of eastern crops.

"Oats grow from 48 to 60 inches in height, and the stalk is as large as a pipe stem, and the upper 16 to 18 inches are occupied by the branching panicles, their sheaths all fully occupied by large and plump kernels. The measured bushel, instead of running under 32 pounds, goes from 42 to 48 pounds, and the yield runs in excess of 100 bushels to the acre, and as high as 129 bushels to the acre is on record. The field pea, which is the superior of Indian corn from all comparable points, grows and produces with the utmost luxuriance. An acre produces from 40 to 50 bushels of peas, and in the neighborhood of four tons of forage from the straw. All root crops are produced in the greatest abundance. Some years ago the American agricultural competition was entered into by a Bitter Root farmer with a sample of potatoes that came from a measured acre yielding 1,213 bushels, and it is needless to say that he took the prize for this product. Mangels, carrots and turnips all yield abundantly. Hard wheat is a more certain crop here than in many of the popularly classed wheat districts, and the yield runs from 20 to 60 bushels per acre, with the former the exceptional yield. With irrigation, celery grown in Montana is more abundant in production, and of a finer and clearer and crisper quality than that produced in the noted celery district of Michigan. No part of the country can equal Montana in the production of any of the varieties of clover. There is no product of the soil, except such as may demand either a very cold or a very hot, tropical climate, that cannot be made exceptionally profitable in Montana.

And Montana presents another advantage to the agriculturist that is not secondary in importance, and that is an unfailing, high-priced home market for every product of the farm and yard. The middle-state farmer is producing largely in excess of the demands of the home market, and as a consequence the surplus has to be shipped considerable distances to the larger centers of population where the demand exceeds the production of the immediate country, and in doing this the larger portion of the scanty margin between what it has cost the farmer to raise his crop, and the price he is paid for it, goes to the transportation company. In Montana the transportation question cuts little figure in the soil products of the ranch, and there is at all times an abundant home cash market, with prices that are much in excess of the eastern figure. This condition will always exist, as the mineral resources of the state will for all time afford employment to thousands upon thousands of men who will produce vast wealth, and in doing so earn the highest of wages, but who do not and will not produce any of the things they consume. The per capita consumption of Montana is greater than that of

any other state, and in the past, and as it will be in the future until our farm lands are settled and made to produce, very much the larger part of the products of the soil that are consumed will have to be imported. But with the settlement of the arable lands of the state, this will be changed, and hundreds of thousands of dollars that are now sent outside of the state for the products of the farm will remain here, where they are made and earned, and will be paid to home farmers for the productions of Montana soil. But a very considerable portion of the population of Montana is now engaged in agricultural pursuits, and the proportion will not be abated, as with the continued rapid development of the wonderful resources of the state, thousands and hundreds of thousands of hands will be employed in the mines, the smelters and their collateral industries; but there are thousands of opportunities for agricultural locations that not only offer a home for those who are now without homes, but that offer an opportunity for the homesteader to prosper and grow rich—to experience a measure of prosperity that has never in any other land been the good fortune of the farmer. Aside from the home market that will provide the best market for the product of thousands of Montana farms, it is in close communication with the western market, and at the very door of the Asiatic market, that is now opening up such extensive possibilities for the products of the American farm and range.

The climate of the state is the most enjoyable and healthful to be found on the continent, and while it lies in a comparatively northern latitude, is favored with the temperature of the more northerly southern states. Its summers are delightfully bright and warm by day, and the evenings and nights are refreshingly cool and restful, while in the winter season the soft chinook winds dissipate the cold and intersperse the crisper days with the inspiring cheer and warmth of full spring time. It is very rare that a period of cold continues longer than from two to four days, or that the snow is allowed to accumulate to any considerable depth, so that cattle, horses and sheep are allowed to range uncared for during the winter months, pasturing upon the rich grasses of the hills and valleys, caring for themselves without cost or worry to the owner. The farmer of Montana is given the opportunity, without the use of any portion of his own landed possessions, to engage in the raising of cattle and horses, and the growing of wool, branches of the agricultural industry that have brought wealth to many of Montana's present residents, and that have not one record of partial failure to be made against them.

The farmer looking for a new location may consider all the advantages offered by every other locality, and when he compares them with those of Montana, he will decide that this is the state in which to establish a profitable and congenial agricultural home.

The Irrigated Lands.

Some of the Semi-Arid Districts of the State That Have Been Artificially Watered—A Co-operative Canal System That Has Been Successful, and Is Making Money for Its Owners.

While the state has many districts that do not require artificial watering, and which are mentioned elsewhere, and has large areas that will have to be watered through the medium of a national irrigation system, as the waters for the purpose must be conserved by large mountain reservoirs and led through the foothill districts by large main canals, all requiring an investment of capital that is greater than can be interested through individual effort, there are also districts where the water has been easily accessible, and the topography of the surrounding country has been such as to warrant irrigation by individuals, corporations and in two instances by co-operative companies, both of which have been wholly successful in watering large areas of land, and in securing profits for those who are interested in them.

In the northeastern part of Montana, stretching from the North Dakota line on the east to old Fort Assiniboine on the west, a distance of 285 miles, and bounded on the north by the international line, and on the south by the mighty Missouri, lies the Milk River valley.

This immense territory was first opened to settlement May 30, 1888, and, misled by an unusual rainfall during that and the following year, the general impression gained was that paying agricultural crops could be produced there without irrigation, and an immense immigration movement immediately set into the valley, but the next two or three years proving dry ones, and no crops being produced, many left the country in disgust. The more determined, however, began looking around for some means to overcome the difficulty in what was otherwise a very desirable section of the state. The center of the irrigation movement at the time was the new town of Chinook. Mr. T. C. Burnes carefully looked the situation over in 1898, and concluded to locate, and to construct an irrigation canal to water his land. He began operations immediately, and had made fair progress when the next year he concluded to make the canal co-operative, and to associate as many in that locality with him as chose to. After much discussion a company was formed, with Messrs. T. C. Burnes, A. H. Reser, Thomas O'Hanlon, James Maney, and W. M. Wooldridge, all of Chinook, as the incorporators. The canal was proposed to reclaim 14,400 acres of land, each farmer was to work out his proportion within a specified time, and if not done his stock was to be sold, and he thereby forfeited all rights in the canal. Doubts about the ultimate success of

the project were freely expressed, but the entire community, including the business men, realized that this was their only salvation, and the work was pushed. During the entire season of 1900 this canal was bank full, and resulted in many thousand dollars worth of farm products being produced.

Since the completion of this first canal, which is known as the "Belknap canal," eight others have been organized, and these cover something like 60,000 acres of choice bottom land. These canals represent an investment of fully \$200,000, all owned and controlled absolutely by the farmers themselves. The cost of reclamation by the means of these co-operative canals has been \$3 per acre, with the maintenance at 15 cents per acre per year.



IN THE MILK RIVER VALLEY.

All of the government land that can be cheaply irrigated in the vicinity of Chinook has now been located, but much land yet remains unoccupied in the eastern part of the valley. The Great Northern railway has during the past year started another colony at the little town of Hinsdale, and have induced Mr. W. M. Wooldridge to go there and identify himself with that section. The same steps are being taken at Hinsdale that proved so successful in the settlement and reclamation at Chinook, where Mr. Wooldridge was station agent when that section was settling up. The same system of co-operative irrigation canals is being followed, a canal covering 10,000 acres of choice bottom lands has been laid out, and work begun on it during the past year. Several thousand acres of these choice bottom lands yet remain unoccupied in the vicinity of Hinsdale, and also many choice stock locations.

A great deal of choice bottom land can yet be entered under homestead and desert acts in the vicinity of Ashfield, in Valley county, also near Culbertson and Glasgow.

In choosing a location the new settler should be sure that there is some possibility to irrigate the land located. This is especially so in the Milk River valley, where the tracts of unoccupied land are so large as to prevent individual ditches.

All of the staple agricultural crops do well in this valley. The general altitude is only a little above 2,200 feet. This makes it possible to produce tomatoes, beans, melons and many tender plants not possible to produce in many valleys having a greater altitude. The yield of the principal agricultural products is as follows: Wheat, 25 to 40 bushels; barley, 35 to 60; oats, 50 to 100; potatoes, 300 to 600; alfalfa hay, five tons; timothy, two tons; blue joint, one and a half tons.

This is one of the greatest stock countries in America. Thousands of beef cattle are annually shipped or driven into this section from Arizona, Oregon, Washington, New Mexico, Colorado and Wyoming to graze one year, and are then placed upon the Chicago market. Of late years considerable attention is being paid to fattening beef and mutton by winter feeding, and with very gratifying results.

Alfalfa has proven a very profitable crop, doing splendidly, and yielding an average of five tons of cured hay per acre, some farmers during the present season having netted as much as \$30 per acre from this plant. Several thousand acres will be seeded to alfalfa during the coming year.

Cattle, mutton and wool shipments during the past season were something like 4,000 cars of beef cattle, 1,000 cars of mutton and 5,000,000 pounds of wool. These industries are merely in their infancy, and will show a very substantial increase during the next ten years.

Fruit growing, as far as tried, has proven successful, much small fruit being produced, and apples, pears, cherries and plums have been largely planted during the past four or five years, and some of these are just coming into bearing, and results are very encouraging.

Good markets are obtained right at home. The products of the valley have not yet reached the point of home consumption, it being necessary each year to ship potatoes, oats, pork, butter and eggs into the valley towns to supply the local demand. Prices of farm products average very high.

Any industrious, economical person need not hesitate to locate in the valley. To those possessing teams, implements, and a few hundred dollars with which to build themselves a home, it offers exceptional inducements. Many who previous to locating in the valley were obliged to depend upon a rented eastern farm as the means of making a living for themselves and their families, have located and built up comfortable homes here, and are now able each year to put away or invest a comfortable surplus after deducting all cost of operating their farms.

The people of this valley are always willing to lend a helping hand to those who seek a home within her borders. Schools, churches and business houses have been established throughout the valley, transportation is easy of

access to or from any part of the world, and every convenience of the older agricultural community may be had.

The laws of Montana favor such enterprises, and safeguards have been put out to protect the small farmer. The by-laws and constitution of these companies provide for the enforcement of assessments, but the state laws and the articles of incorporation also provide that thirty days' notice of the assessment must be given before it becomes delinquent; and further, that another twenty days must elapse before the delinquent stock can be sold, and that an assessment of only 10 per cent. of the capital stock can be levied at one



DREDGING AN IRRIGATION DITCH.

time, which must be paid before another can be levied. This prevents too frequent assessments.

Writing of the success of this co-operative venture, Mr. Wooldridge says: "I wish to call attention to the fact that this work has been done during the time that our country has seen such financial distress; that it was done as a last resort, after those who did it lost every dollar they possessed trying to farm without irrigation. They were deeply indebted to the merchants of that section at the time of starting the enterprise. These merchants offered every encouragement within their power by generously carrying many of the farmers upon their books until they were able to repay them after having obtained water, and to the lasting credit of these same farmers, be it said that the merchants never lost a dollar in misplaced confidence. All this goes

to prove what can be accomplished by a community working in harmony and by united effort. Thousands of worthy families are to be found throughout the eastern states today who have not a roof to protect them from the elements, while the west has abundance of land that can be cheaply reclaimed and made profitable by comparatively little work alone, and where the water is going to waste and causing destruction. But it requires energy and determination to succeed.

Parties desiring to know more of this district, and of the co-operative irrigation project, that commends itself through its demonstrated success, may secure additional information by communicating with Mr. W. M. Wooldrige, at Hinsdale, Valley county, Montana.

Aside from these ditches there are thousands of individual water appropriations that have been made from the smaller streams, and the water taken is used to cover lands located in the immediate vicinity. Every valley in the state where the natural precipitation is not sufficient to insure the annual crops, is dotted with these individually irrigated farms, and their owners, combining agriculture with stock-raising, are among the most favored and prosperous of their class in the world.

Among the irrigation systems that have been established on a larger scale by combinations of capital in the form of corporations, is the canal system just completed in Teton county by the Conrad Investment company, which has its headquarters at Great Falls, Montana, the head of the company being Hon. W. G. Conrad. This system of canals has been under course of construction during the past two years, and is located near the southern boundary of the Blackfeet Indian reservation, four miles north of Dupuyer and about twenty miles north of Pondera, on the Great Falls and Canada railroad. The canal is a part of a well-planned irrigating system, which will water and reclaim thousands of acres of land, which under the existing circumstances, it is impossible to cultivate, but which will be converted into fine farming lands when properly irrigated.

The main canal is twenty miles in length, and branching out from it will be over sixty miles of lateral ditches ranging in length from three to fifteen miles. It is three and one-half feet in depth, 22 feet in width at the bottom, and has a carrying capacity of 20,000 inches. The water supply for the canal is obtained from Birch creek, one of the feeders of the Marias river. Birch creek has its source in the main range of the Rocky mountains, and an ample water supply is obtainable at all periods of the year.

After leaving Birch creek the ditch runs due east a distance of fourteen miles, and then north a distance of six miles, where it empties into a reservoir which covers 3,300 acres at a depth of 15 feet. The water capacity of this reservoir is sufficient to cover a tract of land containing 45,000 acres to a depth of one foot. No ditches have been constructed yet from this reservoir, but the company proposes constructing a ditch from it to a distant tract containing 35,000 acres, known as the Pondera basin.

The present system will irrigate about 40,000 acres. This land lies on the high barren bench between Dupuyer creek and the Dry Fork of the Marias. The soil of this bench is a sandy loam, and is one of the best soils

that is known for the production of crops of any kind. It covers a sandstone formation, and lies at a depth varying from 3 to 10 feet. Upon this land the Conrad Investment company expects to establish a large stock ranch, and what land is not taken up by this ranch will be let out to individuals for farming and ranching purposes.

One of the largest corporation ditches in the state, but which has been converted into a co-operative institution, is that of the Minnesota-Montana Land and Improvement company, with headquarters at Billings. This company places over 40,000 acres under water, most of the land having been secured from the Northern Pacific railway company.



DAM AND HEADGATES.

Construction of this canal was commenced in 1882, and the main ditches were completed the following year. The principal or supply canal is forty miles in length, and takes its supply from the Yellowstone river at Young's Point. It is 25 feet wide on the bottom, and carries about 12,000 inches of water, irrigating about 20,000 acres of land. From the completion of "the big ditch," as is commonly called, dates the year of improvement and prosperity which has marked this favored section of Montana. The water was sold to the settlers at a cost of about 50 cents per acre for the season, which was low compared with the expense in Utah, Colorado and other states, where such canals have been constructed solely as a money making scheme. Since the completion of the canal many expensive improvements have been made,

expensive "fills" have taken the place of flumes, which were liable to be swept away by excessive rains filling the gulches over which they were built, and in a single year \$30,000 was expended in improvements. Now the farmer can confidently depend on having a full supply of water during the summer season, and sows his crops with an unwavering faith that it will not lack water to nourish it, even in the dryest season. This is a confidence the farmer in the non-irrigated sections cannot realize, and the dweller in the "arid west," who can regulate the supply of water to the needs of his growing crops, has long ceased to apologize for irrigation. Last spring the company sold its irrigating canal to a stock company composed of those farmers and ranchmen whose lands are benefited by the same. The company is capitalized in the sum of \$64,000, at \$10 per share. The water right is sold at \$2 to \$2.50 per acre, and thus each farmer or stockholder draws his proportion of the water. The cost of maintaining the canal is estimated to be about 5 per cent.

Since the corporation was made co-operative its membership has grown to 135. The stockholders meet at least twice a year, in the spring and fall, and once a year they elect a board of seven directors or trustees, who elect a president, vice president, treasurer and secretary from among their number and also employ a superintendent and ditch riders. The superintendent has entire charge of all work, and is paid a salary of \$100 a month for six months. The board of directors is limited to \$3,000 in making improvements without the consent of the stockholders. The by-laws state that one director shall be elected for at least every ten miles of ditch, but under the present arrangement there is one for every six miles.

The valuation of property covered by the ditch is given in the following summary:

Lands	\$ 750,000
Sheep being fed in winter from products of ditch.....	375,000
Cattle	450,000
Horses	50,000
Hogs, poultry and vegetables.....	20,000
Alfalfa in stack	150,000
Other hay	40,000
Small grains and seeds	40,000
Value of ditch	100,000

Total\$1,975,000

Alfalfa is proving one of the most profitable crops of the irrigation district, the annual yield running from four to seven tons per acre. In 1898 C. M. Bair raised 1,420 tons of alfalfa hay on 200 acres about four miles from Billings. On the Hesper farms some alfalfa measured nine feet six inches in length. It was on this farm that 31,000 head of lambs were fed on alfalfa hay for the winter market last year, realizing a handsome profit. In all about 110,000 head of sheep were fed in this valley last winter. All the hay has been contracted for for some time. Probably one of the mainstays of the farmer in this valley will always be the raising of hay to feed from the stack, either to his own stock or to that of the neighboring range stockmen. This has proven highly profitable in the past, and will become more general as the range becomes circumscribed by settlement. All the grain crops abundantly

reward the labors of the husbandmen of this valley. Oats weigh from 40 to 52 pounds to the bushel, though the Montana standard of measurement is 32 pounds. The yield ranges from 40 to 150 bushels to the acre. The Hesper farm won the John A. Salzer premium in 1897 by an actual record of 163 bushels to the acre, in a contest open to the United States and Canada.

Potatoes yield from 300 to 600 bushels to the acre. Charles King, of Park City, has an actual record of 1,213 bushels to the acre, and is the record breaker of the United States. All small fruits, such as currants, raspberries, blackberries, dewberries, etc., produce abundantly, and the Yellowstone valley strawberry is the best of all that comes into the market. Apples, cherries and



AN IRRIGATION DITCH.

plums yield abundantly, and the fruit is of the finest quality and flavor. The displays of Bailey & O'Donnell, Olney Taylor and other fruit-growers of the Yellowstone county fair, are greatly admired by eastern visitors. Three of the 18 premiums for fruit displays at the Omaha Trans-Mississippi exposition in 1898 were awarded to Yellowstone county exhibitors.

There are other large ditches in Teton, Choteau, Gallatin, Cascade, Yellowstone and other counties, but more extended mention of these may be found in the articles descriptive of those counties.

In the experiments that have been secured with special crops on Montana irrigated lands, it is found that the sugar beet is one of the most certain, and carries an unusually large percentage of sugar, and as a consequence ultimately proves to be one of the chief products of the semi-arid districts of the state.

The arid region, being free from droughts or unusual rainfall, alike injurious to beets, only requires proper culture and wise use of irrigation to

insure crops that shall be alike profitable to the grower and to the factory. The experience of some of the most successful factories in the west justifies this. It is evident, therefore, that this industry is peculiarly adapted to the arid west. It is almost the only new industry that unites agriculture and manufacture so as to keep within the state or section the money now sent away to pay for sugar brought in from foreign countries or from other parts of this country. In many ways the hour is ripe for a vast development of the beet sugar industry in the United States.

Already thirty-three beet sugar factories are in successful operation in the United States. They are cutting up a hundred thousand tons of beets daily, and are paying the farmers half a million dollars a day for this new crop. Wherever the farmers are practicing the culture of sugar beets with industry and intelligence; it is proving a remarkable crop. Indeed, the beet sugar industry promises to be the greatest addition of the twentieth century to American agriculture.

In order to secure profitable results with the sugar beet, intensive culture is absolutely necessary. The careful preparation of the land, the proper fertilization thereof, and the careful culture of the growing plant are three essential points to success.

The water supply is the most important meteorological condition connected with beet growth, aside from the other natural conditions which attend the summer weather of temperate climates. If the growing beet can be supplied with the proper quantity of water at the proper time, its progress towards maturity is never arrested, and there is no tendency for the plant to ripen prematurely and afterwards undergo a second growth.

Arid lands contain quantities of soluble salts. The sugar beet is pre-eminently a mineral-assimilating plant, and a growth of beets upon lands impregnated with soluble salts will tend to remove them from the soil, and thus improve the quality of the land thereby. The sugar beet, therefore, is confidently recommended to all owners of irrigated lands as a crop which promises the most favorable returns.

Of crops that are profitable and certain on the semi-arid lands, and which will be useful in putting to use the little areas that on account of their relative altitude cannot be artificially watered, are Kafir corn, broom-corn and millet.

The State Arid Land Commission.

Mr. D. A. Cory, secretary of the State Arid Land Commission, in his annual report says that a tract of land in Lewis and Clarke county has been segregated, and that there are prospects of having it placed under water in the near future; that responsible eastern parties have District No. 1, near Billings, under consideration, and the commission hopes for favorable results. There is a total of 10,632 acres in this district, and its close proximity to Billings should make it an attractive proposition to investors, as the land would be taken as fast as the contractors could get it ready for the settler. The Northern Pacific land department own 15,000 acres which should be made a part of this district, and have offered exceedingly favorable terms to prospective purchasers. The engineering work, through the financial aid of the public spirited citizens of Billings, has been completed.

Work in district No. 2 should have begun on June 1, 1900, but, for reasons satisfactory to the commission, the time has been extended to April 1, 1901, with the understanding that no further time would be asked or granted.

In district No. 3 twenty thousand acres of magnificent bench land have been selected, and, situated as it is, between the thriving towns of Bridger and Red Lodge, there would be no delay in its prompt settlement, upon the completion of the canal. The commission feel safe in saying that this canal will be built during the year 1901.

Bids for the building of the canal system in District No. 4 were duly advertised, and the commission hopes to let the contract in the near future. The water for this system will be taken from the Dearborn river, and the valleys of Flat creek, Dry creek, Simms creek and Spring coulee reclaimed, in all, about 33,000 acres. The contract will provide for the prompt settlement of the land as fast as it is reclaimed.

In the last report we published an article from the pen of Prof. Emery, of the Bozeman Agricultural College, on the cultivation and productive ability of a 160-acre irrigated farm, and as the item attracted general attention in eastern agricultural communities, and as it also demonstrated what the acreage of this western country can do in the line of supporting population and of creating wealth when its millions of thirsty acres are given water, the item is reproduced:

The ownership of lands carries with it a duty to our fellows and to posterity which cannot be gainsaid. It is ours to handle to the best advantage, and we cannot discharge this duty upon any lines save those of the greatest production commensurate with the conservation of soil fertility. How this may be done is one of the most important agricultural problems. Beyond doubt the annual cropping of the soil is along this line, for notwithstanding the apparent gain in crop yields under summerfallow, as against annual grain cropping, it is a fact scientifically determined that this stimulus is an unnatural one, and that in time great loss of valuable mineral properties from the exposure of the bare soil to the summer winds and fall storms is bound to work serious impairment of value to land.

Crop rotation is left as the only intelligent method of farming, as it is out of the question to annually apply farm manures to so extended farm areas, as rapidly as the resultant good effects therefrom are consumed. Do not understand that manuring of lands is decried; not at all; all of this sort of work should be done that is possible, but where one undertakes to apply barnyard manure at the rate of twenty loads per acre, it becomes a sizable task when between 3,000 and 4,000 loads are required to a quarter section of land.

Nor have many Montana farmers the living machines for manufacturing farmyard manure in such amounts, i. e., the cattle or farm animals and the grain, hay and roots to be transformed into available plant food. So that it becomes a matter of necessity to formulate such a system as will be a combination of stock-growing and hay, grain and root tillage, with the distinctive plan in mind of feeding out upon the farm a large per cent. of grain, and all of the hay and roots. The 160-acre farm should be sub-divided into 40-acre tracts, each of which should be fenced with such a fence as will permit the

ranging of swine and sheep as well as cattle inside each field. Fencing machines, strongly built, cheap and easy of manipulation, are manufactured, and smooth wire of suitable sizes is sold at so low a price per pound that these stock-proof fences can be constructed at half the former expense of the cumbersome old rail and wire leaning fences which used formerly to mar the Montana landscape in every direction in the settled portions of the state. Again, the red cedar is indigenous to much of Montana, and a good taut closely woven smooth wire fence built on peeled red cedar posts is a neat, durable and substantial barrier to your own or your neighbors' stock. The question may be pertinently asked, why fence the entire farm for stock? Why not have pastures securely fenced, using a four-strand barb wire fence on



THE PRODUCT OF IRRIGATED FARMS.

balance of farm? Simply that the whole farm is designed to be pastured in its turn during the twelve months.

Montana is extremely dry, as a rule, during and immediately preceding grain harvest, and the loss in shelled grain from this cause is too great to be afforded unless the fields are fenced so that swine may be turned in between harvest and fall plowing to glean the fallen grain, and this they will do to perfection if given the opportunity. The fields divided into 40-acre tracts (it will pay you to sub-divide again into 20-acre tracts), there should be plans made to produce hay (preferably of alfalfa, clover or alsike), wheat, oats, barley, peas and roots, on about the following areas; say

40 acres devoted to hay.
 20 acres devoted to wheat.
 20 acres devoted to oats.
 40 acres devoted to barley.
 20 acres devoted to peas.
 5 acres devoted to potatoes.
 2 acres devoted to sugar beets.
 3 acres devoted to mangel wurzels.
 5 acres devoted to swine, clover pastures.
 5 acres devoted to roads, buildings, corrals, etc.

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We will suppose that the land was of average quality, and had been summerfallowed the preceding year. The first season there might be 80 acres seeded to barley, of which 40 acres could be sown to clover, alfalfa or alsike, or an equal number of acres to each; they are all valuable forage plants and good yielders.

The following amounts of seed per acre are ample: Of clover and alsike, seven pounds; of alfalfa, twenty pounds. Do not sow with grain, that is, do not mix seed in seeder with seed grain, but sow the clover seed subsequently, using any one of the reliable hand sowers, broadcasting the seed on the surface. If the grain is sown with a drill it is well not to harrow until the clover seed is sown, then across the drill marks with a Scotch harrow, a light single harrowing. Of course, it takes time to inaugurate a rotation system.

It will be found a valuable thing to do (if water is abundant) to seed the entire 80 acres of barley to clover, irrigating the barley twice before cutting, and once immediately after. Should this be done apply the first irrigation as soon as the grain covers the ground, the second just before the grain begins to head, and the third irrigation just as soon as the grain is cut and hauled off for stacking; say within two weeks after barley harvest. The result will be, under normal conditions, a growth of clover over 12 inches high; this will bloom just before frost, and will make a splendid fall pasture or a green manure crop of great value to be turned under. These crop yields ought to result as follows:

80 acres barley, 4,000 bushels, 200,000 pounds.

20 acres wheat, 800 bushels. (Spring Club.)

20 acres oats, 1,500 bushels.

20 acres peas, 60 bushels.

5 acres potatoes, 1,500 bushels.

2 acres sugar beets, 60,000 pounds.

3 acres mangels, 1,500 bushels.

The crops for sale are worth, at normal prices:

4,000 bushels of barley, at 50 cents.....	\$2,000.00
800 bushels of wheat, at 50 cents.....	400.00
1,500 bushels of potatoes, at 25 cents.....	375.00

Gross returns of sale crops from 105 acres.....\$2,775.00

Upon the 5-acre swine pasturing sow spring rye early in April, seeding with this alfalfa at the rate of twenty pounds per acre, give a good irrigation about the 25th of May, and by June 15th there can be safely turned on to this pasture six grade Berkshire and Poland China sows and their first litter of

pigs. These sows should bring two litters of pigs per annum, or eighty head of swine, annually, estimating seven pigs to the sow at each litter (as a matter of fact they will average more than eight in number per litter.) Turning these sows with their first litters into the pasture by June 15th, they will then gain a complete subsistence from the rye and alfalfa; should there later be a shortage in feed, it can be supplemented with peas, cut just as they begin to harden, and fed in racks in the swine pasture (and it will surprise eastern pea-growers to see how long it will take fifty swine to consume the peas grown on a Montana acre of land, where pea vine growth often attains



A MONTANA RANCH SCENE.

a length of twelve feet.) They will consume probably two acres of peas by the time harvest is over, and can then be turned into the fields to glean; we have had a herd of fifty head of shoats average a growth of ten pounds each per week for six weeks in the fall on grain fields. The eighteen acres of peas will yield 540 bushels of peas, and seventy ton of good winter forage for cattle, sheep or horses. These 540 bushels of peas, with the 1,500 bushels of mangel wurzels and the sugar beets will fatten the first litters of forty head of swine in December, and the same number in the following July (the date when the second litter will be ready to turn off), and the swine at this age should average 175 pounds, and be worth at the current rates for pork, \$10 per head, or a revenue of \$800 from swine, these bringing the receipts of the 160-acre farm up to \$3,600, or an average of \$22.50 per acre.

The clovers, red, white, alsike and alfalfa and peas are legumes, and potent introducers into the soil of the most expensive chemical fertilizer known to the farmer, namely, nitrogen. Following these crops the following year may be produced better grain crops than can be harvested from the best summerfallowed land, and by following this plan year by year, alternating the wheat, oats and barley the lands which produced clover, peas and roots the preceding year, it will be entirely feasible to duplicate these ordinary yields and prices for an indefinite term of years. We submit that no man is entitled to sympathy who can show gross receipts per acre of \$22.50 per annum, when the usual average of the United States is less than \$6. No account has been made of the disposition of the 40 acres of clover hay, easily capable, after the first year, of the production of 100 tons of hay, worth \$5 per ton, nor of the 75 tons of pea forage, worth \$1.50 per ton, as compared with clover, or of the good clean, bright straw from the 80 acres of grain. If the grain is stacked and also the threshed straw, this is worth easily \$1 per ton, and at the rate of a ton per acre (a safe estimate), \$80 can be realized for a crop which is too often consumed by fire to the actual detriment of the land. But speaking within bounds, after providing for the forage wants of the six horses required to farm this land, and of the four cows, which self-respect should require to be on each farm for the supply of the milk and butter there consumed, the residue of forage ought to be adequate to the stall fattening of forty steers, which should pay a profit of at least the estimated value of the forage crop, \$600, for the added value from feeding such a ration during the three winter months.

Should it not be possible to procure steers to be fed, lambs would pay quite well, or aged wethers, or open range stock, say 100 head, can usually be contracted for winter feeding, at \$1 per month, or \$500 for such a herd.

The benefit deriving from their droppings will easily offset the value of the labor in feeding in any case. This profit, added to the other farm receipts, will bring the gross revenues up to \$4,200, certainly a favorable showing to be produced on 160 acres of land.

The Irrigation Question.

The Fact That Artificial Watering of the Great Semi-Arid Districts Must Be Accomplished by the General Government Is Popularly Accepted—The Wealth It Would Bring to the Country as a Whole—Project Too Large for Private Capital.

The last report of this bureau discussed at some length the proposed reclamation of the semi-arid district under state auspices, acting through state legislation under the offer of title by the Cary Act of Congress, but since that date there has been a more than appreciable growth of sentiment in the east, as well as in the west, in favor of the undertaking by the general government, not only for such districts within this state, but for the arid regions of the states lying to the south. The east is beginning to appreciate that the cultivation of the semi-arid lands of the west by means of irrigation opens an almost boundless field of possibility. The character of the soil, the climate, and all the natural conditions are such as to insure immense productiveness under the most favorable conditions if only the natural water supply can be used. Contrary to a somewhat general belief, the amount of water now used is only a small fraction of the available supply, and enough water runs to waste every spring to irrigate every acre that requires artificial watering to make it produce to the maximum of its capacity, and that can be covered within a reasonable expenditure. After leaving the closer foothill district that borders the ranges in Montana, practically all the bench and prairie lands that stretch for hundreds of miles to the eastern boundary of the state, can be watered by the supply that can be conserved in the immediate mountain catchments, and, after the construction of the reservoirs and the canals leading the waters through the foothills, may be carried to this immense district at a nominal cost per acre. But the utilization of the abundant waters of the mountain ranges that now go to flood the lower Missouri and Mississippi, and the diversion of water from some streams of abundant volume to distant areas of land, are problems for which the resources of private capital are insufficient. The irrigation of the arid lands of the west by means of long ditches and large reservoirs is peculiarly a field for national aid. It is something that cannot be accomplished in any other way, and it is also something that will be immensely valuable to the entire country, so much so that the national government may use for that purpose money raised by taxation with as much propriety as for the improvement of the harbors along the sea coast. The national lands are an asset of the nation, and their improvement is an investment that is certain to bring magnificent returns to



A MOUNTAIN-SIDE CANAL

LIBRARY
OF THE
UNIVERSITY of ILLINOIS.

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every interest, industry and individual in it. The soil cannot be made to produce without adding of its wealth to that of the nation. The scheme of irrigation, like that of transportation, covers many states and benefits all parts of the country, and properly belongs to the general government to put it in effect.

This view was accepted by Congress when it made an appropriation in 1887 of \$100,000 to be used by the director of the geological survey, for the purpose of ascertaining the feasibility of establishing reservoirs of water with a view to the establishment of a system of irrigation, and to ascertain to what extent the arid regions of the United States could be benefited by such a system, and several reservoirs with large catchments were located along the eastern slope of the Rockies in Montana, and estimates have been made upon the cost and amount of arid land, and that which can be reclaimed for agricultural purposes, has been determined, as well as that for timber and grazing. The precipitation of the different arable sections of the state lying within the semi-arid region, has been accurately taken, and every form of data secured necessary to an intelligent undertaking of the project by the national government.

The rapidly growing belief that this work should be undertaken by the general government, led to the organization of the National Irrigation Association, and through its efforts a great deal has been done in educating the commercial and other interests of the country to the importance of the project to the entire country, and in demonstrating that while the location of the work may necessarily be sectional, that the benefits that must accrue must be equally advantageous to the prosperity of the entire country. Many of the cities of the middle states and the east have fully appreciated the logic of the situation, and have added their organized influence to furthering the general demand for national irrigation of the arid west. The business men and their associations have taken the matter up, and as a sample of this work, the Merchants' and Manufacturers' Association of St. Paul, Minnesota, recently issued a letter that stated:

That they had "carefully considered the policy advocated by the National Irrigation Association for the reclamation and settlement of the arid region of the United States, and endorse it fully, as set forth in the constitution of the association, annexed hereto.

"That policy in brief is that the Federal government shall, wherever necessary, build the irrigation works required for the reclamation of the arid public lands, reimbursing itself from sales of the land reclaimed; and that a fair share of each river and harbor bill shall hereafter go for building storage reservoirs, as recommended in the Chittenden Report on Surveys for Reservoir Sites.

"We believe that the inauguration of this policy would be largely beneficial to St. Paul, and all its business and property interests, through the rapid settlement and development that it would bring about in the great arid region in Montana and other arid states commercially tributary to St. Paul. When we consider that nine-tenths of Montana is government land; that Montana is larger than Ohio, Indiana and Illinois combined; that at the last census

the population of these three states was 9,645,856, and that of Montana only 243,329; and that Montana, if her irrigation resources were fully developed, would sustain as large a population as the three states named, the magnitude and vast and far-reaching importance of the problem becomes at once apparent.

"An effective national organization is necessary to secure the carrying out of the policy advocated by the National Irrigation Association. The plan of the association to accomplish this is as follows:

"First—That all commercial organizations shall strongly endorse this policy, and actively co-operate with the National Irrigation Association to bring about its adoption by the Federal government.

"Second—That merchants and manufacturers shall correspond with all their business connections, and ask their active and personal co-operation and membership in the association.

"Third—That all would be benefited by the commercial development and rapid settlement of the west, and should join the National Irrigation Association, so as to give it the strength of a large personal membership and a fund for carrying on its work of enlisting a general and widespread public interest and support for the movement."

They heartily approve and commend the plans of the association as above set forth, and will co-operate to aid in carrying them out, and have joined the association, and believe it will be for the best interests of all the merchants, manufacturers, business men and property owners generally of St. Paul, to give their strong support to this movement in this way.

The letter, continuing, says that "the interest in the national irrigation movement awakened among leading merchant and manufacturers through such letters as those written by merchants of St. Paul to their business connections in the east, proves beyond a doubt that by such correspondence the broad national importance of the national irrigation movement and its far-reaching benefits to all classes and sections of the country can be deeply impressed upon the commercial interests of the east, and their co-operation secured to bring about the inauguration of the national irrigation policy.

Ex-Speaker Reed said: "Every wise man agrees that beyond the Mississippi lies the great wealth of the days to come. In the development of this wealth we are all interested, and we in the east are not the unwise men to believe that we are not concerned in the progress and future of the west," and this sentiment is now being echoed by every prominent public man and newspaper in the east, the middle states and in the west.

Civilization sprang from agriculture, and the agriculture of the ancients was not left dependent upon the erratic clouds of heaven, but was made dependent upon the certain service of the dam and ditch.

In a lecture recently delivered at Great Falls by Hon. George H. Maxwell, president of the National Irrigation Association, he related the possibilities of this great state, when, added to its unequalled resources in other lines, and to its districts that are agriculturally productive without artificial watering, the great tracts that are not certain of production without irrigation, and are now devoted to range, will be given abundant moisture, and called atten-

tion to the fact that Montana is as large as the state of New York and all of New England. If all the waters that goes to waste and flows away to the ocean from the rivers of Montana, that could be utilized for irrigation, were brought upon the land of Montana, and used to make that land fertile, it would produce an annual yield of agricultural and livestock products as great in total value as the output of Illinois, Indiana and Ohio.

The annual floods of the Missouri river come largely from Wyoming and Montana, and run their course of destruction to the Gulf, tearing away banks, filling the river with snags, destroying channels, undermining bridges, jeopardizing the safety of cities and towns, breaking levees, overflowing farms and plantations, and at times overwhelming whole communities with disaster.

The Chittenden report is one of the ablest ever made to the government. It is an exhaustive research into and discussion of the whole problem of reservoir construction in its relation to the future of the west and of the benefits that are to accrue from it in the east. In conclusion his report says:

"First—A comprehensive reservoir system in the arid regions of the United States is absolutely essential to the future welfare of the national domain.

"Second—It is not possible to secure the best development of such a system except through the agency of the general government."

It must be borne in mind that it is not proposed that the Federal government shall store this water for sale to those who use it for irrigation, or seek to make a profit directly from the investment.

The use of the water so stored should be absolutely free to the people forever, just as the canals, harbors and other public works are free for general use without toll or levy of any kind."

These reservoirs would be built merely as a natural and legitimate exercise of the same governmental policy under which the Federal government now builds levees on the Missouri and Mississippi, and has built large reservoirs to store these same flood waters, not only protecting the lower country from flood, but at the same time preserving the upper country from drouth. In the tenth annual report of the United States geological survey, Major Powell claims that every acre reclaimed from drouth in the northwest by the storage of the flood waters of the Missouri will reclaim an acre from overflow in the lower Mississippi valley.

It is rather the popular opinion that the diversion of our streams and the application of their waters to the irrigation of contiguous arid lands, would deprive the streams of their water, and be detrimental to the navigable rivers, but the contrary is the fact. In localities where irrigation has been long practiced, that water diverted for irrigation is not lost; that after what is called the period of infiltration is passed the whole country between the canal and the river becomes filled with water like a great sponge and a large part of the water taken out of the canal returns gradually to the river or stream. This is what is called the return seepage. If all the flood waters of the Missouri and its tributaries in Montana were reservoired and taken out into canals for irrigation a great part of it would return gradually to the river during the dry season, and the flow of water in the river would be regu-

lated, and instead of being lessened in the dry season, it would be increased.

The fact that the establishment of mountain reservoirs and the irrigation of our semi-arid lands will prevent the flooding of the lower rivers and in doing so save from annual destruction a great deal of both commercial and agricultural property along the lower Missouri and Mississippi has directly touched the individual interests of the south and brought its immediate and active support to the cause, and the general position of that part of our people is expressed in the following resolutions recently passed by the St. Louis Manufacturers' Association:

"Whereas, The question of storage reservoirs to be constructed by the Federal government for the purpose of holding water in the mountains has been thoroughly discussed and passed upon by eight annual sessions of the National Irrigation Congress as the proper method to supply the arid west with irrigation water; and

"Whereas, The question of irrigation has been thoroughly discussed and passed upon as the only means of reclaiming and putting into cultivation the arid lands of the west; and

"Whereas, The storing of water in mountain reservoirs would greatly lessen if not prevent the overflows of the lands on the lower Missouri and lower Mississippi rivers, as well as tributary streams; and

"Whereas, The entire interests of the entire arid west demand irrigation, and the overflowed lands of the south and middle states demand protection; therefore, be it

"Resolved, That the St. Louis Manufacturers' Association in behalf of its patrons of the arid west and the overflowed district, asks that those two interests combine their power, and pledges to support the combined powers of those interests in securing from the Federal government the necessary appropriations for storage reservoirs for the purposes named; and be it further

"Resolved, That the St. Louis Manufacturers' Association feels confident that the Federal government has the same right and with equal justice can appropriate money for the improvement of rivers and harbors, of lakes and other internal development; and, be it further

"Resolved, That the St. Louis Manufacturers' Association will do all in its power to bring together these two interests to further the joint and common interests of all concerned—the west, the south and the southwestern states."

The enterprise is on a scale worthy the attention of the general government because of the benefits that must come from the development and growth of the west, to the whole country, and the broad-minded, far-seeing merchants and manufacturers of the east, when the subject is brought to their attention, see clearly that increased population and prosperity for the west would mean increased prosperity for the east. It would increase the markets for the eastern merchants and manufacturers in the west, increase the demand for labor in the eastern factories, and increase their home market for the eastern farmers. When these eastern merchants and manufacturers are selling millions of dollars' worth of goods in the west every year, they are willing to help the western merchants who buy those goods to develop their trade.

But they will not do it unless they are asked, and we cannot get the effective aid of these eastern interests unless we have a most perfect organization in the west. It is recognized that the support of the east is necessary to a final accomplishment of the project, and this space is devoted to it with the purpose of aiding in placing the matter before that portion of our people to the extent of the circulation in the east of this volume.

From the foregoing it is evident that irrigation of the arid portions of the west has secured the support of the eastern and middle state, southern and southwestern press, and the commercial and industrial associations of those sections. They have placed themselves on record, and in doing so have laid the foundation for the ultimate success of the great project. But to secure action and comparatively immediate results, the proposition must continue to receive the active support of every section. If the support is allowed to become passive, there will be no power to urge action and promote popular education, that will bring the irresistible support of organized public opinion.

It is this work of organization and education that the National Irrigation Association has undertaken, and it should receive the material and moral support of every citizen of every section.

The association was an outgrowth of the National Irrigation Congress, which held its last annual session at Missoula, Mont., last September.

The chairman of the executive committee of the National Irrigation Congress for that year was Mr. I. D. O'Donnell, of Billings, Mont. He attended the convention of the Trans-Mississippi Commercial Congress at Wichita, Kan., May, 1899, and that congress strongly endorsed the National Irrigation movement. The National Association was organized at that time at Wichita. Mr. O'Donnell was one of the moving spirits in its organization, and is now vice president of the association for Montana.

Irrigation of any considerable area of land is beneficial in a multitude of ways that will not be apparent to those who have not given the subject mature and deliberate consideration. It lends itself naturally to diversified farming, and tends to make the population self-sufficient within itself. It has a tendency to discourage the production of single line crops, and helps to make families independent by producing the variety of things they consume, and this tendency is steadily growing. Diversified farming, which irrigation promotes, will be an important element in contributing to the independence of the people who will in the near future inhabit and till the soil of the great arid regions.

Where the water is not under speculative control, and the lands can only be cultivated by the artificial application of water, the realty holdings are small. This is a natural consequence, for the reason that irrigation multiplies and intensifies the productive ability of the lands, and demands a proportionate increase of labor upon them. Agricultural labor on irrigated lands calls for intelligent attention and close application, and is performed more by the resident agriculturist than by the employed farm hand, and the result is a multitude of small proprietors personally performing or attending to the work of their limited holdings. These results of irrigation have been demonstrated in every locality where the artificial watering of the lands made the diversification of the soil products possible, and as both the climatic and soil condi-

tions of the arid portions of Montana would not only allow, but would demand the widest range of diversification, the increase of the most desirable of citizens that would come to the state with the irrigation of semi-arid districts, would be very large.

One of the evils of the irrigated home under individual irrigation, is its isolation. Where individual rights have been acquired the streams are small and the valleys are narrow, and the inducements of the public range that lies back of the valley, and the natural restriction of the easily irrigable area, have induced the location of narrow strips of land along each side of the valley streams, and this has resulted in the wide separation of the farm homes and a loss to the resident families of the privileges of schools, churches and of social life. With the irrigation of large tracts of bench and prairie under the auspices of the Federal government, there would be a home on every eighty or at the most on every 160 acres, and the privileges of civilization that have been lost under the individual appropriation of water, would be restored. The agricultural society, when occupying areas irrigated by the general government, will enjoy a happy combination of village and country life. It will have convenient access to libraries, schools, churches and local entertainment, because the population will be of sufficient density to both warrant and demand the privileges, and the people of every agricultural community will have the independence which springs from the proprietorship of the soil, and the satisfaction of the instinct which comes only with the community of association. The irrigation of the great plains of the arid west will give the nation a new continent where every condition will be favorable to the rapid growth and development of the best forms of civilization, and of the noblest institutions.

The east, equally with the west, when it comes to consider the question in its broadest sense, looking at it from the interests of an undivided country, where the prosperity of a part must of necessity contribute to the prosperity of the whole, will give a united support to securing the storage and diversion of its western streams for the irrigation of its hundred million acres of irrigable lands; the harnessing of its water powers to mill and factory wheels; the crowding of its pastures with added millions of livestock; the conversion of its forests into human and industrial habitations, and the providing of prosperous and happy homes for millions of people.

The people of the whole country are becoming alive to the fact that the creation and distribution of the untold millions of wealth that lie latent in the west, awaiting only the magic touch of water to flow forth, would benefit every class of people of every section of the country. The benefits would come to the millions of new home-builders in the west, the eastern merchants and manufacturers, and merchants who would supply the new markets thus created, the workers in the factories of the east who would be called upon to make the things the new settlers of the west would want, and the agriculturists of the east would be specially benefited by supplying the demands of the new factory workers. No product of the land of this distant west would ever come into competition with that of the eastern farmer.

The rapidly multiplying millions of the east are beginning to see, as they

never saw before, that they need but to reach out their hands to open for themselves the gateway to the great west of the future, with all its boundless opportunities for wealth production, and for building homes and prosperous communities. The people of the east are not heedless of the prophecy of Macaulay, of which Garfield said that when he first read it "it startled me like an alarm bell at night." They see that we have already in the east our Birminghams and Manchesters, and that "in these Birminghams and Manchesters hundreds of thousands of artisans will assuredly be some time out of work." But as they turn to the west they see that we still have, to quote Macaulay's words, "a boundless extent of fertile and unoccupied land," needing only the touch of water to be made productive. And they see that for years to come there is an outlet for all our surplus labor in the reclamation and settlement of this great domain of arid land in the west.

Writing in the *North American Review* some ten years ago, General Nelson A. Miles said the subjugation of the deserts of the west and their complete conquest of this great empire will be the grandest achievement of the people of this nation in the early years of the twentieth century.

The "Open Sesame" which will swing back the gates leading to the greater west, and open them to this vast army of home-builders has been found. It has been evolved from the experiences of twenty years of preliminary irrigation development, and from the investigation of eminent experts and engineers of the government, and from the deliberations of the annual sessions of the National Irrigation Congress for the last eight years, and it has finally crystallized in the constitution of the National Irrigation Association.

It is the inauguration of a broad national policy under which our forests shall be preserved and re-forested, and the Federal government, owning 100,000,000 acres of irrigable land, shall build the great canals and irrigation works necessary for its reclamation which are beyond the scope of private capital, and shall build great reservoirs to store the flood of waters and stop the destruction they now cause as they run to waste; and that not another acre of public land shall be hereafter given to any state or territory, or to any one but an actual home-builder on the land.

The recent convention of the National Irrigation Association held in the city of Chicago was marked by thoughtful, energetic and co-operative sentiment and action and its deliberations have already done much in advancing the popular project throughout the middle states and east. The problem under consideration was recognized at its true value; the most prominent business men of that city attended the meetings and participated in the deliberations, extending their hearty support; the press extended its columns to the uses of the association, and the eastern correspondents gave it extended consideration.

Among those who were present at the convention representing Montana, were Hon. T. C. Power, Oscar Bradford, George M. Hays, John T. Murphy, A. T. Newberry, Helena; Rev. A. Wormser, Wormser; Lee Sedgwick, W. B. Sands and wife, M. A. Arnold, H. C. Reynolds and wife, Chinook; Major C. R. A. Scoby, Poplar; Hon. A. W. Mahon, Dr. M. D. Hoyt, Glasgow; W. P. Wren, L. G. Phelps, Great Falls; I. D. O'Donnell, Hon. C. Yegan, Billings;

W. E. Ellis, Butte; W. M. Wooldridge and wife, Hinsdale; Dr. F. W. Trap-hagen, Prof. Samuel Fortier, J. B. Berglean, Prof. S. M. Emery, Bozeman; Hon. T. M. Everett, Harlem.

I. D. O'Donnell, of Billings, was elected as executive chairman for Montana, and W. M. Wooldridge of Hinsdale as vice-president for Montana.

The St. Mary's Lake project that was surveyed during the past summer and fall under the auspices of the United States Geological Survey, was gone into in detail at the Auditorium theater. The lecture was illustrated by numerous stereopticon views, taken in the territory through which the canal must pass. The proposition has been found to be entirely feasible and practical. There are several routes through which it may pass. It is merely a question of selecting the best one.

The consensus opinion of the delegates of the convention was that the general government should construct the reservoirs and the canals through the foothill districts, and that the people should build the distributing system. The growth of the national irrigation sentiment among the business men of the east, and the active co-operation afforded by them was evident and acknowledged.

Among the most notable papers read at the convention, was one from Gen. Nelson A. Miles, who said that some of the oldest lands of history are now all arid, having in their day grown rich and powerful solely because they farmed these arid lands from choice, and with a water supply altogether artificial. Historically considered, the moist lands and the humid regions were the last to be occupied by a high civilization, and among the original enterprises of mankind was the making certain of the food supply without reference to the uncertain rainfall of any given year.

The question of irrigation in the United States has in recent years become a topic of absorbing interest. The public lands which are arable and lie in the humid and sub-humid regions are practically all now occupied, and the process of spreading out and occupying has had its first check. Yet the soil of the arid region is very rich. There is every inducement to settlement if there were only a certainty of even a half supply of water.

It is rapidly becoming a settled conviction that individual enterprise can never entirely and inadequately solve the problem of western irrigation. The task is a vast one, extending far beyond state lines and individual interests. In view of the fact that there are vast areas of the public domain still remaining unoccupied, it might be well for the government to devise some system by which these lands may be utilized and colonized for the benefit of the home-builders who constitute our best population.

The government of our country has an important mission to perform, now that it has once taken charge of the work, and it is presumed that it will continue until a time when the entire irrigation system will be under its control, with one simple law governing it alike in all the western states and territories. The enormous amount of money required to place the desert lands in a productive state would have to be furnished by the government, as it would be impossible for the states and territories to complete so vast a system as must be undertaken, and the funds expended should, by a well-

matured and comprehensive plan, revert again to the treasury of the general government from the sale of its lands thus improved.

The state of California is blessed with prosperity derived from its irrigating works, and is fast being populated with a prosperous class of agriculturalists who have been brought thither mainly through the success of irrigation.

To pass from the hot, arid regions into the fertile valleys of California is as gladdening to the eyes of the beholder as the sight of an oasis is to the traveler in the desert. To see the countless acres of trees with their ripening fruit, the unlimited acres of grapes, fields of wheat, barley and alfalfa, and everything breathing life and health, is to see the blessed use of water, husbanded and cared for and appreciated in all its worth. Without irrigation, except in certain moist lands, these beautiful valleys and lowlands once more revert to desert wastes.

It is a well-known fact that after land has been thoroughly cultivated by irrigation less water is required; and it is safe to assert that thousands of acres of so-called desert land may become adapted for agricultural purposes without the quantity of water at first necessary.

Extravagance in expenditure should be avoided and the government should systematically improve only its lands which will repay the expenditure, and divide the same in such manner that it can never be monopolized by a few, but shall be cultivated by an industrious, enterprising, and intelligent people, who will build for themselves and their posterity homes that will enrich and beautify the region, thus sustaining and promoting the general welfare.

Mr. Alexander H. Revell spoke on "The Grandest Opportunity in the Pathway of Nations:"

"America" said Emerson, is another name for "opportunity." Opportunities come to nations as well as to individuals. Will the United States as a nation avail itself of one of the grandest opportunities that has ever fallen in the pathway of nations? The advantages to the commercial and manufacturing interests of the country from the rapid settlement of the arid region are manifest. But there is another point of view far more important from which I have looked at the matter and which seems to me to be worthy of the most serious consideration. The population of our great cities and manufacturing centers of population are becoming congested. We need an outlet for our surplus population. The next great problem we must face is the relief of the crowded conditions of our centers and the amelioration of distress of the poor in our great cities. Probably no greater problems than these can be brought before the people of the United States at this time, and may we not find in this movement to reclaim arid lands—a solution, which will bring about results at once far-reaching and beneficial? If these government lands were provided with water for irrigation, many of the poor could get five, ten, fifteen or twenty acres of land and thus become independent. I believe it would be a great benefit to all our people if the government would adopt a policy, under which the many million acres of government land, which can be reclaimed by irrigation, could be divided up into

small tracts and settled by industrious farmers. Will the opportunity and the burden be accepted by the nation as a nation? Or will the great work be divided among a thousand money-making land and water companies aiming to make vast profits to be taken from the poor whose hopes are for freedom and independence, but who would be mortgaged, bound hand and foot for a hundred years? We find the answer springing from millions of true hearts from all parts of our country—"The Nation will do it."

Speaking on the subject in a general line, F. H. Newell, chief hydrographer of the United States Geological Survey, and that one-third of the whole United States, exclusive of Alaska and outlying possessions, is vacant and at the disposal of congress. For the most part it is open to homestead entry and settlement, and much of it consists of land possessing great fertility except for the lack of water. At intervals are to be found mountain masses from which come perennial streams whose waters are now used to a small extent to moisten the lands. At intervals there occur local storms or floods inundating large tracts. There is ample water for the reclamation of a considerable portion of this arid land, if it would all be saved and put to use. Attempts have been made by individuals and by corporations to construct ditches, canals and reservoirs to supply the lack of moisture. As a rule the smaller works taking water from perennial streams have been not only been successful but sources of great profit to the owners. The great storage reservoirs and canals are comparable in one sense to lighthouses and harbor improvements; they are necessary and worth far more than they cost but under existing state of civilization they cannot be made to contribute exclusively to the welfare of the builders. The indirect gain or unearned increment of value is so widely diffused that the general public reaps the largest reward.

We are confronted with a situation where there is a vast amount of fertile land to be reclaimed and considerable quantities of water to be conserved to this thirsty land. By such action millions of homes can be created and the commonwealth enormously strengthened, by the addition of a producing population where each head of family owns and lives upon his farm. To bring about this happy result it is impossible to trust speculative enterprise, because of the fact that profits cannot be made in the construction of a work, unless the population becomes tenants of a great land-owning monopoly.

At the conclusion of the convention, the following resolutions were unanimously adopted:

"We hail with satisfaction the fact that both of the great political parties of the nation in the last campaign declared in favor of the reclamation of arid America, in order that settlers might build homes on the public domain, and to that end we urge upon congress that national appropriations commensurate with the magnitude of the problem should be made for the preservation of the forests and the reforestation of denuded areas as natural storage reservoirs and other works of flood protection and to save for use in aid of navigation and irrigation the waters which now run to waste and for the development of artesian and subterranean sources of water supply.

"The waters of all streams should forever remain subject to public control and the right of the use of water for irrigation should inhere in the land irrigated, and beneficial use be the basis of measure and the limit of the right.

"The work of building the reservoirs necessary to store the floods should be done directly by the government under existing statutes relating to the employment of labor and hours of work and under laws that will give to all American citizens a free and equal opportunity to get first employment, and then a home on the land.

We commend the efficient work of the various bureaus of the national government in the investigation of the physical and legal problems and other conditions relating to irrigation and in promoting the adoption of more effective laws, customs and methods of irrigated agriculture, and urge upon congress the necessity of providing liberal appropriations for this important work.

The objects of the National Irrigation association as expressed in its constitution, are to accomplish the following purposes:

The adoption by the Federal government of a permanent policy for the reclamation and settlement of the public domain under which all the remaining public lands shall be held and administered as a trust for the benefit of the whole people of the United States, and no grants of the title to any of the public lands shall ever hereafter be made to any but actual settlers and home-builders on the land.

The preservation and development of our national resources by the construction of storage reservoirs by the Federal government for flood protection, and to save for use in aid of navigation and irrigation the flood waters which now run to waste and cause overflow and destruction.

The construction by the Federal government of storage reservoirs and irrigation works wherever necessary to furnish water for the reclamation and settlement of the arid public lands.

The preservation of the forests and reforestation of denuded forest areas as sources of water supply, the conservation of existing supplies by approved methods of irrigation and distribution, and the increase of the water resources of the arid region by the investigation and development of underground supplies.

The leasing of public grazing lands which are unsuitable for agriculture at a nominal rental in limited areas to settlers farming adjacent lands, the revenue from rentals to be used for irrigation development in the states and territories wherein the lands are situated, leases to be subject to right of reclamation by irrigation, and of settlement of lands actually reclaimed, title of land to remain in Federal government until actual settlement.

The adoption of a harmonious system of irrigation laws in all the arid and semi-arid states and territories under which the right to the use of water for irrigation shall vest in the user, and become appurtenant to the land irrigated, and beneficial use be the basis and the measure and limit of the right.

The holding of an annual irrigation congress, and the dissemination by public meetings and through the press of information regarding irrigation, and the reclamation and settlement of the arid public domain, and the possibili-

ties of better agriculture through irrigation and intensive farming, and the need for agricultural education and training, and the creation of rural homes as national safeguards, and the encouragement of rural settlement as a remedy for the social and political evils threatened by the congestion of population in large cities.

All applications for membership shall be submitted to the executive committee, and when approved by them the applicant shall be enrolled as a member by the recording secretary, and be entitled to a certificate of membership on payment of the annual dues for the first year.

The executive committee may enroll as an affiliated member of this association, and issue a certificate of membership to any other association or organization, which shall extend its support and co-operation to this association by a resolution endorsing the national irrigation policy advocated by this association, and the president or any representative delegated by such affiliated association or organization may represent it in any meeting or congress held by this association, and no fees or dues shall be payable to this association by any such affiliated association or organization, or its said president or representative.

The executive committee may enroll as an honorary member of this association, and issue a certificate of membership to any state or federal officer or appointee, or the editor or publisher of any newspaper or journal, or the president of any university or college, or person eminent in scientific or educational or philanthropic work, and no fees or dues shall be payable by honorary members. Honorary vice-presidents of the association may be chosen by the executive committee from the honorary members of the association.

The following is a brief summary of the policy advocated by the National Irrigation association for the rapid settlement and development of the western half of the United States:

First—The adoption by the Federal government of a permanent policy for the reclamation and settlement of the public domain under which all the remaining public lands shall be held and administered as a trust for the benefit of the whole people of the United States, and no grants of any of the public lands shall ever hereafter be made to any state or territory to any but actual settlers and home-builders on the land.

Second—The Federal government now owns one hundred million acres of land which is worthless only because arid. If reclaimed by irrigation it would become marvelously productive and sustain a dense population.

It is proposed that the government shall build the large irrigation works necessary for the reclamation of this arid land, so as to bring the waters that now go to waste within reach of private enterprise, and then sell the land with an interest in the water to actual settlers in small tracts, for enough to cover the entire cost of reclamation, in addition to the government price of the land.

The government would thus be reimbursed, from the sale of the land, for its entire expenditure, besides realizing many millions in addition from what is now a worthless asset, and transforming uninhabitable wastes into fertile fields and farms and prosperous communities.

Third—It is proposed that the west shall hereafter have a fair share of each river and harbor bill, as recommended in the Chittenden report, to build storage reservoirs to store the waters that now cause overflow and destruction as they go to waste in winter floods.

The government would be reimbursed for these appropriations, just as for other improvements of rivers and harbors, through the general development and prosperity of the country and the increase of commerce.

Besides this, a reasonable increase in the price of the 100,000,000 acres of irrigable public land, when reclaimed by irrigation, would far more than cover the cost of all reservoirs the government would build.

The carrying out of this policy by the national government would be equivalent to the creation and annexation to our national domain of so much new territory. If its original acquisition under the Louisiana purchase was a wise policy, it must be equally wise to make that land habitable. It can never be done by private enterprise. The irrigation works necessary for its reclamation must be built on too large a scale.

Whatever there may be of opposition to this policy arises from misapprehension. Some think it is proposed to involve the Federal government in large expenditures without returns. This is a totally erroneous view. On the contrary, the government would get back from sales of its now worthless arid lands, many millions in excess of all its expenditures.

It is conceded that the western half of the United States would support a greater population than the whole United States contains to-day, if the waters which now go to waste were saved and utilized for irrigation. The inauguration of the policy advocated by the National Irrigation association would increase population in the west with marvelous rapidity and enormously enlarge the demand for everything the west buys from the eastern merchant and manufacturer.

An effort is being made in the present session of congress to secure funds for the preliminaries of active work of construction, and it must be hoped by the broadminded and appreciative citizen of every part of the country that the first definite step toward securing the reclamation of the arid portions of the west will be ungrudgingly taken and that after the work has once commenced, it will be carried to an uninterrupted conclusion.

The Use of Water in Irrigation.

(By S. Fortier, Director Montana Agricultural Experiment Station.)

During the past forty years large quantities of water have been diverted from the natural streams of Montana through thousands of ditches and canals. These artificial water-ways have cost vast sums of money and it is difficult to estimate the value of the water conveyed by them when applied to the fertile lands of the state.

Notwithstanding this large outlay in both labor and capital as well as the necessity which exists in nearly every section for an additional supply of moisture over that which nature provides, little has as yet, been done to ascertain what use was being made of the large volumes that were diverted.

The Montana Experiment Station, recognizing the important relation which water bears to agricultural products, was one of the first, if not the first to undertake this work. For the past two seasons experiments have been carried on in co-operation with the office of Experiment Stations at Washington, D. C., to find out the actual quantities of water used in irrigation. The experiments have been conducted under varied physical conditions, with different crops and in widely separated districts of Montana.

The following brief summary of the results of twenty of these tests may convey some idea of the nature of these investigations. In the accompanying table, the quantity of water applied throughout the season is expressed in feet and indicates the depth of water over the entire surface irrigated.

THE QUANTITY OF WATER USED IN IRRIGATION.

Year.	Kind of Crop.	Irrigated Area.	Depth of Water Received.			Yield Per Acre.	Remarks.
			Irriga- tion.	Rain- fall.	Total.		
		Acres	Feet	Feet	Feet		
1899	Red Clover ..	27.44	1.02	0.44	1.46	3.0 tons	Irrigated twice.
1899	Peas ..	4.23	1.10	0.41	1.51	31½ bush.	Irrigated twice.
1899	Barley and Wheat ..	11.27	1.38	0.42	2.40	61½ bush.	Irrigated twice.
1899	Barley ..	66.39	0.98	0.41	1.39	.....	Irrigated once.
1899	Oats ..	23.41	1.53	0.38	1.91	51 bush.	Irrigated once.
1899	Oats ..	7.26	1.34	0.36	1.70	72½ bush.	Irrigated twice.
1899	Oats ..	2.48	3.16	0.36	3.52	75½ bush.	Irrigated twice.
1899	Oats ..	25.00	1.28	0.44	1.72	.....	Irrigated once.
1900	Red Clover ..	66.39	1.96	0.44	2.40	.....	Irrigated twice.
1900	Barley ..	4.14	1.50	0.28	1.78	46½ bush.	Irrigated twice.
1900	Oats ..	25.00	0.64	0.29	1.00	.....	Irrigated twice.
1900	Barley ..	1.00	1.17	0.28	1.45	57 bush.	Irrigated twice.
1900	Oats ..	3.51	1.39	0.40	1.79	75 bush.	Irrigated twice.
1900	Barley ..	4.52	1.96	0.42	2.38	69 bush.	Irrigated twice.
1900	Clover ..	7.26	2.70	0.44	3.14	5 tons	Irrigated four times.
1900	Red Clover ..	25.90	1.79	0.44	2.22	4 tons	Irrigated three times.
1900	Alfalfa ..	53.40	1.39	0.44	1.74	51-5 tons	Irrigated once.
1900	*Apple Orchard ..	40.00	1.46	0.12	1.57	.....	Irrigated four times.
1900	Oats ..	161.70	1.30	0.13	1.43	33 bush.	Irrigated twice.
1900	Oats ..	102.30	6.06	0.13	6.17	34 bush.	Irrigated twice.

* Trees five years old.

Considerable work has also been done by the same agencies in determining the loss due to seepage from the larger canals of the state.

When it is not known how much water escapes through the porous materials which form the channels of earthen canals it is impossible to apportion equably the flow between the various stockholders. The quantity wasted in this way may vary all the way from 10 to 50 per cent of the total flow. When the seepage is unknown the loss is usually borne by those who take water from the lower half of the canal.

Some of the results of seepage investigations are given in the following table:

SEEPAGE LOSS FROM CANALS.

NAME OF CANAL.	LOCALITY.	Total Volume Received.	Section at Length	Loss In Section.
		Sec. Ft.	Miles	Sec. Ft.
1899.				
Middle Creek Canal	Gallatin County	98.9	4.00	21.60
1900.				
Middle Creek Canal	Gallatin County	63.04	4.00	13.24
Farmers' Canal	Gallatin County	122.00	10.75	23.50
West Gallatin Irrigation Canal	Gallatin County	114.65	28.75	29.78
Big Ditch	Yellowstone County ..	254.47	23.00	65.05
Republican Canal	Ravalli County	120.49	12.20	23.64

* One second foot is equal to 40 Montana miner's inches.

The information now available on the water supply of this state has been chiefly derived from researches made by the hydrographic division of the United States Geological Survey.

Some time ago, Mr. Newell, the chief of that division, appointed the writer, the local hydrographer for this state. The results of the stream measurements made during the past season are not yet computed, but the following tables giving approximate results are herewith presented in order to show the scope of the work. These figures representing the summer flow of four Montana streams are expressed in second-feet. Since there are 40 miner's inches in each second-foot the figures may be readily converted into miner's inches by multiplying each by 40. These measurements only cover rivers of the southeastern portion of the state. Other portions of the state have a water supply equally abundant.

The discharge of the Yellowstone river near Livingston, Mont., for every alternate day from May 1, to October 31, 1900, expressed in second-feet.

DAY.	May.	June.	July.	Aug.	Sept.	Oct.
1...	2,460	10,060	7,275	3,345	2,125	1,715
3...	2,060	12,490	6,602	2,342	2,050	1,780
5...	4,730	12,230	6,230	3,060	2,050	1,715
7...	5,745	15,350	5,792	2,960	2,000	1,715
9...	6,924	14,535	5,505	2,922	1,950	1,670
11...	10,370	10,575	5,162	2,790	1,900	1,622
13...	9,140	10,350	4,830	2,725	1,900	1,585
15...	5,980	12,740	4,630	2,665	1,850	1,542
17...	6,420	12,085	4,345	2,547	1,805	1,585
19...	5,697	10,660	4,260	2,419	1,850	1,585
21...	6,148	11,105	4,075	2,422	1,805	1,565
23...	7,069	11,014	3,900	2,375	1,760	1,535
25...	7,924	10,127	3,730	2,375	1,760	1,542
27...	12,490	9,249	2,730	2,317	1,715	1,542
29...	12,374	3,155	2,575	2,300	1,715	1,542
31...	10,060	.....	2,420	2,150	.....	1,500

The discharge of Gallatin river at Logan, Montana, for every alternate day from May 1, to October 31, 1900, expressed in second-feet.

DAY.	May.	June.	July.	Aug.	Sept.	Oct.
1...	1,575	2,570	605	290	400	530
3...	1,622	4,240	520	290	400	530
5...	1,950	4,222	460	290	400	542
7...	2,065	4,520	460	290	400	530
9...	2,005	3,695	400	245	400	505
11...	2,535	3,520	245	245	400	505
13...	4,240	2,210	240	245	400	505
15...	3,102	1,762	240	245	400	505
17...	2,905	1,575	240	245	400	505
19...	2,905	1,205	240	245	530	505
21...	2,905	1,090	240	245	530	505
23...	2,905	1,000	240	245	530	505
25...	2,565	940	240	245	530	505
27...	4,222	850	250	400	530	505
29...	4,905	690	250	400	530	505
31...	4,240	.....	250	400	.....	505

The discharge of the Madison river at Red Bluff, Montana, for every alternate day from May 1, to October 31, 1900 expressed in second-feet.

DAY.	May.	June.	July.	Aug.	Sept.	Oct.
1...	3,005	4,840	2,075	1,640	1,640	1,850
3...	4,060	5,100	1,862	1,640	1,640	1,850
5...	4,185	5,222	1,850	1,640	1,640	1,850
7...	3,912	5,375	1,850	1,640	1,640	1,850
9...	4,185	5,100	1,850	1,850	1,640	1,850
11...	4,710	4,840	1,850	1,850	1,850	1,850
13...	5,100	4,060	1,850	1,640	1,640	1,850
15...	4,460	2,515	1,850	1,640	1,640	1,850
17...	2,775	2,005	1,850	1,640	1,640	1,850
19...	2,260	2,520	1,850	1,640	1,640	1,850
21...	2,645	2,300	1,850	1,640	1,640	1,850
23...	2,122	2,122	1,850	1,640	1,640	1,850
25...	4,185	2,075	1,850	1,640	1,640	1,850
27...	5,100	2,075	1,850	1,640	1,850	1,850
29...	5,625	2,075	1,850	1,640	1,950	1,850
31...	5,170	.....	1,640	1,640	.....	1,850

The discharge of the Jefferson river at Sappington, Montana, for every alternate day from May 1, to October 31, 1900, expressed in second-feet.

DAY.	May.	June.	July.	Aug.	Sept.	Oct.
1...	3,375	5,895	1,370	600	515	1,090
3...	4,060	5,515	1,590	600	515	1,205
5...	4,405	5,895	1,465	515	600	1,465
7...	5,062	5,705	1,465	515	600	1,465
9...	5,610	5,235	1,225	515	600	1,465
11...	6,200	4,970	1,205	515	685	1,465
13...	3,045	4,060	1,205	515	685	1,225
15...	3,922	2,375	990	515	685	1,225
17...	3,730	2,375	775	515	685	1,225
19...	3,045	4,225	625	515	775	1,205
21...	3,645	2,375	625	515	875	1,205
23...	6,960	2,510	625	515	875	1,225
25...	6,060	2,495	625	515	875	1,225
27...	6,460	2,170	600	475	980	1,465
29...	6,060	2,020	600	475	980	1,465
31...	6,175	.....	600	515	.....	1,465

The Stock Interests of the State.

The Past Season Has Been Prosperous and the Prospects for the Future are Good—Reports of the Industry.

The cattle men of Montana have not had any reason to complain of conditions that have obtained in their industry during the past year, and in fact, it is seldom that those following this pursuit in Montana have any legitimate causes for complaint. Shipments during the past season have been close and the average price received for choice rangers was \$4.50 per hundred pounds, and the poorer stock brought good prices. One of the benefits that will accrue from the year's close shipping is that it will greatly relieve the winter range. The feed during the summer season was abundant and will be for the winter season, providing the snowfall is not so heavy that it covers the comparatively short growth. The winter season up to the date of the closing of this volume, has been especially favorable to stock, as it has been exceptionally mild, with just enough snow to allow stock to leave the streams and feed farther back on the range, and there have been no bad storms or extreme cold. A very large majority of the growers are prepared to feed for a considerable length of time, and as the season has not yet drawn upon their supplies, it may be safely predicted that the herds will come through the balance of the winter in excellent form, no matter what the weather conditions may be for the ensuing portion of the winter.

The following table shows the receipts of range cattle at Chicago by months, for the past four years:

Month.	1900.	1899.	1898.	1897.
July	5,700			
August	45,100	36,800	40,742	30,300
September	43,000	67,300	54,796	30,000
October	39,700	67,300	63,337	78,700
November	2,500	15,000	17,300	21,100
Total	142,500	177,300	186,175	200,000

The Chicago stock report says that the bulk of good to choice rangers, taking the season as a whole, sold between \$4.50 and \$5, with a considerable number above \$5. During the first half of the season sales of extra good cattle between \$5 and \$5.35 were not uncommon, the latter figure being high water mark for any considerable number. It was first touched on August 23,



SCENES IN THE CATTLE INDUSTRY.

a string of C. J. Hysham's Montanas (of the old Murphy brand) landing at that figure, and later in the season one or two other small lots achieved the same distinction. Last season \$5.40 represented the extreme top of the market, this price having been paid for a few small bunches of extra choice hay fed steers, but the legitimate top for straight range cattle was the same as during this season—\$5.35.

The same authority gives the following as the top prices received in the Chicago market during the past twelve years:

1900.....	\$5.35	1894.....	4.90
1899.....	5.40	1893.....	4.75
1898.....	5.00	1892.....	4.00
1897.....	4.90	1891.....	5.00
1896.....	4.35	1890.....	4.80
1895.....	5.10	1889.....	4.10

The report of the State Board of Stock Commissioners says:



BRANDING HORSES.

"As a result of the rigid economy practiced by the board during the past 10 years, its finances have been placed on a sound basis, and the fund at its command will now permit the accomplishment of a much greater and more satisfactory work than in past years. Inspection was more liberally apportioned during the year 1900 than during any previous year. Owing to this fact, and we believe that, great as have been the benefits of the board's work to stockmen in past years, it will prove vastly more so in the future."

The board gives the following as the regular inspection force: At Chicago, R. P. Heren, C. L. Heren; St. Paul, H. E. Bourdette; Omaha, R. H. Rickard; Miles City, W. D. Smith; Billings, J. W. Collins; Helena, E. K. Preuitt; Fort Benton, Harry Lund; Lewistown, E. D. Bowmer; Butte, Frank Carter; Dillon, N. W. Staudaher; Madison County, W. W. Green; Valley County, C. S. Stafford, at Culbertson; Carbon County, Manford Engle. There are also a number of commissions held without compensation by the board, by

stockmen in various localities which gives additional protection to the stock interests, and A. A. Burbanks, of Cascade County, is commissioned as inspector, receiving compensation per diem for the actual time he is in engaged in inspection work. So it will be observed that the entire state has been quite thoroughly covered by the work of the inspectors and every county has received more or less direct inspection work. The regular inspectors, while keeping headquarters at some central point, are kept traveling to all parts of the state from which cattle or complaints emanate, and the work of the force of inspectors has been very satisfactory during 1900.

The inspection of cattle and horses at the markets has been maintained in the same efficient manner as in the past, and a complete record of all cattle shipped out of the state is kept on file for public inspection with the Montana



ONE OF MONTANA'S SOURCES OF REVENUE.

Stock Growers' association at its office in Helena. Proceeds of all strays recovered have likewise been forwarded to the secretary-treasurer of the association for disbursement to the respective owners, who are located by means of the general record of marks and brands. In all cases where owners file written application at Chicago for the remittance of their proceeds of strays direct without going through the process of being disbursed by the association, the request is always complied with, and in this manner the proceeds of about two-thirds of all the strays recovered go direct to the owners from the market points. The association keeps a complete record of all the cattle, however.

Cattle shipments for 1900 again fell short of the previous year by 10 to 12 per cent, which can be accounted for in the further shrinkage of the range cattle business. The steady and rapid settlement of the state is fast curtailing the range privileges, and while there was a decrease in the output, yet the total number of cattle remaining in the state doubtless shows a decided increase over the previous year, owing to the multiplication of small ranch herds, the increase of which aggregates more than the decrease in range herds. During the past year the inspectors' reports give a total of 120,055 head of

cattle shipped out of the state, including those sent to eastern markets, feeders shipped into the corn belt, and some 2,000 head that were sent to the Pacific coast markets. Slaughtering establishments on the coast are just learning the value of Montana beef, and it is not improbable they will create quite a valuable market there for Montana products inasmuch as they are unable to supply their own demand. In addition to the cattle shipments the home consumption is estimated at about 60,000 head, making the total beef output 190,055 for the year. Of this number there were 11,649 head of strays found by the inspectors, proceeds for 7,751 of them being remitted direct to owners, while the remaining 3,898 head were remitted for through the Montana Stock Growers' association.

The high prices of young stock were maintained, so that there is still a shortage in the number brought in to replenish the ranges, the total aggregating 70,000 head, of which 445 head were thoroughbred cattle for breeding purposes. Through this continued importation of fine breeding stock the quality of Montana cattle is steadily improving.

Notwithstanding the slump in the horse market, the average price on Montana horses has still been fairly good, and with the exception of the previous year, was better than for a number of years prior to 1900. As a result there was a continuance of the unusually heavy shipments of horses in 1899, and during 1900 the total shipments of horses from the state of Montana exceeded 70,000 head, nearly all of which were marketed in the farming districts of the Mississippi and Missouri valleys. This has served to clear the ranges in several counties of a most desirable class of livestock, which possessed little value and yet served to prevent stockmen from putting in some more profitable kind of stock.

We append hereto a statement of the cattle inspection work of the board since its organization:

Year.....	Cattle Inspected	Strays Recovered	Arrests....	Inspectors..	Year.....	Cattle Inspected	Strays Recovered	Arrests....	Inspectors..
1895	79,089	1,006	19	8	1893	279,153	17,546	15	14
1896	119,620	1,720	42	9	1894	302,952	19,855	15	13
1897	82,124	2,100	13	8	1895	304,480	24,246	16	16
1898	167,002	2,790	6	9	1896	264,864	20,275	16	16
1899	123,800	2,424	20	5	1897	252,163	19,104	15	15
1890	174,005	2,961	21	9	1898	222,225	16,062	15	15
1891	260,000	12,746	14	10	1899	206,406	10,706	12	12
1892	202,000	11,110	7	12	1900	180,055	11,649	20	12

There were 35,000 horses inspected in 1899, and 70,000 the past year, and in the latter year there were 41 estrays recovered.

The bounty law has been working most satisfactorily, and all old claims have been cleared up and a large cash balance accumulated for the payment of current claims. This will doubtless tend to stimulate hunters and trappers in the extermination of wolves, inasmuch as a cash bounty is a great incentive, and we believe there is little desire on the part of stockmen for any change in the present law.

Dr. M. E. Knowles, State Veterinarian, in his report to the Stock Commissioners, says that during the year 161 calls were answered to investigate

a variety of epizootics. Many of these, to be sure, were found upon investigation to be of a sporadic character, not at all serious in their nature; the main diseases of importance claiming our attention being glanders among horses, tuberculosis and blackleg among cattle, scab among sheep; and of a less serious nature, influenza and distemper among horses, scab and pink-eye or contagious ophthalmia among cattle.

During the year 62 head of horses were destroyed on account of glanders and 295 were quarantined on account of exposure to this disease.

Three hundred and eighty-one cattle were tested with tuberculin, 30 of



STARTING ON THE ROUNDTOP.

which responded, showing unmistakable tuberculosis and were destroyed. Where practicable all such quarantined cattle were immediately released after being tested with tuberculin.

In one outbreak in Madison county, the animals being range cattle and impossible to test, were therefore detained in quarantine, at this date the order still remaining in force. It is interesting to note that out of the number found suffering from the disease but two were range cattle, the remainder being under close domestication. It is also the strongest possible evidence of the necessity for more careful sanitary supervision of our cattle under close domestication. In but one case did we discover a tubercular animal shipped from another state, and this was due to the fact of our having a quarantine proclamation against the introduction of breeding cattle from other

states without being accompanied by a health certificate and tuberculin test. This cow had been tested by the State Veterinarian of Illinois, found tubercular and condemned. The owner spirited the cow away by night and shipped her to Redwood Falls, Minnesota, from which point she was shipped to Granite county, this state, where I discovered her on information received from the Secretary of the Live Stock Commission of Illinois. The cow was destroyed, but no action was taken against the owner for the reason that at the time of notification by the secretary of the Live Stock commission of Illinois, he was absent from this state and proved beyond question that he had



DINNER ON THE BOUNDARY.

no knowledge of the condition of the cow until his return some weeks later.

Vaccination against blackleg has become more and more popular during the past three years as is evidenced by the following statement of vaccine distributed by private concerns and the United States government:

	1897.	1898.	1899.	1900. (9 mos.)
Private concerns	20	11,500	22,100	23,000
U. S. Department of Agriculture	..	400	1,415	34,985
Total	20	11,900	23,515	57,985
Grand total				93,420

The above figures are not entirely accurate so far as the private dealers are concerned for the reason that a considerable amount of their sales are

made to jobbing houses and from these concerns distributed to dealers throughout the northwest, but this is the estimate of concerns, and is sufficient to furnish a good idea of the growing popularity of the preventive, and also would seem to justify my efforts in agitating the idea among stock men immediately upon entering the office early in 1897. The fact is, that the twenty doses shipped into the state in 1897 were ordered by me personally, and from this number the use of the vaccine has increased to 57,985 for only the first nine months of the present year, or at the rate of 77,312 for the entire year. This speaks for itself.



LETTING THE STOCK GRAZE.

That all our cattle men are not as yet familiar with vaccination and its benefits is evidenced by the weekly receipt of letters from various localities throughout the state inquiring about vaccination, where to secure the vaccine, etc. I have endeavored through the public press to advise our cattle men of the fact that the government is supplying vaccine free of charge to all upon application. Those desiring blackleg vaccine should address the Bureau of Animal Industry, Department of Agriculture, Washington, D. C., when an application blank will be mailed them on which they can make their request and be supplied. I would suggest that it is always a good plan to apply for a few more doses than are actually required for the reason that there is always more or less waste. In addition to the vaccine it is only now necessary to procure the antitoxin syringe together with a porcelain mortar and

pestle that can be thoroughly sterilized by boiling. *This outfit can be secured for a price not exceeding \$4.00 and will be serviceable for years if properly cared for. It is also an excellent idea to order a few extra needles with the syringe in case that those accompanying it may be broken.

By the above figures it will be seen that during the past three years the demand has more than doubled each year and should this obtain during the coming year a conservative estimate of the vaccine that will be used in Montana will probably exceed 150,000 doses annually. That vaccination has proven eminently successful is also evidenced by the figures given above. Personally I know of but two complaints and in both these instances the fault was probably with the operator and not with the vaccine. However, the method of applying the government vaccine is now much simplified as it is unnecessary to filter it. It is likely that the filtering process was responsible for failures in some instances.

Scab among cattle has been quite prevalent again this year in the northern part of the state, but the cattlemen, now appreciating its importance, are taking the matter actively in hand so that within a few years it will be stamped out, and practically unknown. Two dipping vats were constructed during the year for cattle, one by Mr. John Harris on Willow Creek, near the old station of Galata, and one by Mr. D. A. G. Flowerree, at Ethridge, on the line of the Great Northern. The Harris vat is a well constructed one in which cold dip was used during the past summer. The Flowerree vat is also an excellently constructed vat being provided with steam heating plant, complete in all its appointments. Hot lime and sulphur dip was used and this is believed to be the most efficient and cheapest remedy for this disease. As nearly as can be ascertained about 14,000 cattle were dipped and hand-treated for scab during the past year. On those that were hand-treated paraffine oil containing about two per cent of sulphur was successfully and largely used. Many owners have used the more expensive lard, sulphur and carbolic acid with equal success.

A mild form of influenza among horses was prevalent throughout the state during the late summer and early fall. Where this disease was reported an effort was made to instruct the owners in the use of influenza antitoxin, which is a preventive, and has been used to a limited extent.

There have been no cases of hog cholera reported during the year, nor has there been a case of rabies among dogs.

Health certificates, including tuberculin tests, were received by this office for thoroughbred cattle imported from other states to the number of 445—350 bulls and 95 cows.

Health certificates issued for southern cattle by the government inspectors, Arizona, New Mexico, Texas, Kansas, Colorado, Nebraska and Wyoming veterinarians, were honored to the extent of 29,568.

Health certificates issued for horses, cattle and sheep leaving the state are as follows:

Horses	1,370
Cattle	7,552
Sheep	33,700
Total	42,622

SEVENTH ANNUAL REPORT OF BUREAU

COUNTIES.	July, 1895			August, 1895			Sept., 1895			Oct., 1895			Nov.,	
	Wolves ..	Coyotes ..	Amount ..	Wolves ..	Coyotes ..	Amount ..	Wolves ..	Coyotes ..	Amount ..	Wolves ..	Coyotes ..	Amount ..	Wolves ..	Coyotes ..
Beaverhead ..	29	687	12	12	385	13	336	85	3185	115				
Broadwater ..	17	51	6	18	3	6	10	30	5					
Carbon ..	25	75	19	57	14	42	3	9	32					
Cascade ..	28	60	249	2	31	99	19	45	180	20	97	351	3	3
Choteau ..	161	633	2,322	104	573	1,431	123	453	1,759	26	162	694	9	121
Custer ..	236	494	2,370	344	233	1,721	168	124	879	164	267	1,363	93	268
Dawson ..	20	23	546	75	149	681	10	21	133	23	59	345		24
Deer Lodge ..	8	24					2	24	6	15	4			
Fergus ..	30	217	946	13	76	267	34	114	414	76	113	667	11	120
Flathead ..	7	39	125	4		12	1	3	18	54	18			
Gallatin ..	11	33	14	42	1	31	96	1	34	75	2	34		
Granite ..	9	27					15	45	4	12				
Jefferson ..	7	21	3	9	1	3	6	15	4					
Lewis and Clarke ..	1	7	24	4	104	334	3	11	39	2	12	45	4	21
Madison ..	11	35	16	48	40	120	9	27	37					
Meagher ..	9	39	144	1	3	13	54	15	45	6	23			
Miscoula ..	39	117	3	6				4	12	9				
Park ..	1	65	196	3	9	5	15	19	67	2	33			
Ravalli ..	2	6						4	12	5				
Silver Bow ..			1	3				3	9					
Sweet Grass ..	15	67	346	11	23	7	34	123	3	55	174	5	32	
Teton ..	23	237	1,077	7	61	204	24	33	318	25	89	342	23	83
Valley ..	39	196	855	66	384	1,350	1	107	324	5	123	417	30	202
Yellowstone ..	121	151	816	4	84	204	24	68	276	27	102	387	65	368
Totals ..	973	2,518	10,467	622	1,567	6,567	412	1,217	4,280	323	1,259	4,926	259	1,875

1898.	December, 1898.			January, 1899.			February, 1899.			March,	
Amount	Wolves ..	Coyotes ..	Amount	Wolves ..	Coyotes ..	Amount	Wolves ..	Coyotes ..	Amount	Wolves ..	Coyotes ..
\$246	108	108	\$224	85	85	\$285	142	142	\$480	2	180
15	1	9	30	38	38	114	15	46	64	.....	9
96	8	82	210	1	9	80	1	17	54	.....	6
39	6	33	87	7	47	182	13	33	138	14	62
390	68	473	1,423	46	448	1,423	20	487	1,441	19	178
1,080	317	618	2,790	57	213	807	39	271	930	84	347
72	19	36	166	6	55	180	6	71	221	11	108
12	.....	18	54	.....	67	301	.....	48	144	.....	32
573	27	146	516	9	230	744	3	49	150	10	68
36	.....	21	93	.....	37	111	.....	22	66	.....	43
78	7	187	222	.....	33	949	1	44	136	1	69
.....	.....	18	54	.....	65	196	.....	9	18	.....	6
12	.....	19	54	.....	46	138	.....	15	45	.....	23
105	.....	8	24	.....	19	57	1	24	76	6	30
111	.....	70	210	.....	53	159	.....	15	46	.....	95
87	3	88	123	3	46	147	2	33	106	1	32
27	.....	121	203	.....	5	15	.....	46	128	.....	1
120	4	30	102	.....	22	46	.....	97	31	.....	15
18	.....	12	39	.....	6	13	.....	10	30	.....	26
.....	.....	.....	.....	.....	60	130	.....	14	43	.....	13
261	11	162	519	14	101	245	6	24	90	.....	75
246	8	156	492	4	23	108	7	65	306	14	124
606	9	461	1,410	9	237	728	5	251	789	6	139
1,200	25	147	514	13	111	267	12	73	286	16	144
5,775	513	2,967	10,410	173	2,123	6,668	117	1,612	5,797	120	1,823

COUNTIES.	1899.	April, 1899.			May,	
	Amount	Wolves	Coyotes	Amount	Wolf Pups	Wolves
Beaverhead	3618	105	3485			
Broadwater	27	3	9			1
Carbon	18	2	60		19	
Cascade	228	36	364		12	6
Choteau	628	100	1,362		15	6,325
Custer	1,323	306	2,349		28	111
Dawson	367	137	717			57
Deer Lodge	39	64	123		41	2
Fergus	304	61	561			24
Flathead	129	1	61			
Gallatin	210	15	45			1
Granite	13	35	76			
Jefferson	69	17	61			
Lewis and Clarke	124	6	61	417		26
Madison	285	120	300			2
Meagher	19	19	159			3
Missoula	3	6	213			4
Park	46	1	100			
Ravalli	105	27	61			
Silver Bow	36	14	46			
Sweet Grass	225	6	159			3
Teton	444	27	329		12	6,325
Valley	489	1	219			1
Yellowstone	480	144	687			13
Totals	6080	364	2,364	225		427

1899.		June, 1899.				TOTALS.			
Coyotes ..	Amount	Wolf Pups	Wolves ..	Coyotes ..	Amount	Wolf Pups	Wolves ..	Coyotes ..	Amount
1,418	900	.....	.....	22	134	.....	.....	284	22,942
.....	12	.....	.....	.....	.....	.....	1	120	267
.....	6	.....	.....	.....	.....	.....	15	220	740
1,418	303	.....	.....	6	222	40	150	804	2,414
1,418	1,055	.....	.....	273	806	116	800	4,184	14,922
1,418	675	.....	.....	10	346	70	2,000	2,381	12,540
1,418	132	.....	.....	17	230	64	478	800	4,174
1,418	3	.....	.....	11	26	.....	.....	370	720
1,418	430	.....	.....	1	453	60	305	1,570	5,803
1,418	9	.....	.....	.....	.....	.....	.....	227	704
1,418	20	.....	.....	.....	.....	.....	.....	800	1,740
1,418	.....	.....	.....	.....	20	.....	.....	220	404
1,418	20	.....	.....	.....	20	.....	.....	100	479
1,418	202	.....	.....	1	90	21	20	341	1,202
1,418	27	.....	.....	.....	.....	.....	.....	400	1,401
1,418	146	.....	.....	.....	20	.....	40	370	1,203
1,418	6	.....	.....	.....	20	.....	0	210	340
1,418	147	.....	.....	.....	20	.....	12	221	206
1,418	12	.....	.....	.....	40	.....	.....	121	267
1,418	3	.....	.....	.....	0	.....	.....	110	230
1,418	90	.....	.....	.....	140	.....	.....	720	2,414
1,418	200	.....	.....	.....	207	21	207	1,003	6,000
1,418	120	.....	.....	.....	1,000	107	200	2,002	9,000
1,418	147	.....	.....	.....	115	9	674	1,372	5,367
1,418	271	417	70	1,781	5,000	842	5,117	22,513	22,200
1,418	5,000	.....	.....	120	.....	.....	.....	.....	.....

* Claims issued under law of 1899.

SEVENTH ANNUAL REPORT OF BUREAU

BOUNTIES PAID ON WOLVES AND COYOTES DURING THE YEAR 1900, AS
REPORTED BY HON. T. S. HOGAN, SECRETARY OF STATE.

January.					March.				
Counties.	Wolf Pups	Wolves	Coyotes	Amount	Counties.	Wolf Pups	Wolves	Coyotes	Amount
Beaverhead			53	\$182	Beaverhead		1	63	\$127
Broadwater			4	8	Broadwater		1	10	25
Carbon		1	13	43	Carbon		4	34	68
Cascade	3	6	16	68	Cascade		6	13	68
Choteau		9	18	81	Choteau		6	47	124
Custer	3	41	134	494	Custer		28	100	673
Dawson		6	30	88	Dawson		23	75	261
Deer Lodge			14	36	Deer Lodge			33	66
Fergus		9	68	187	Fergus		16	106	375
Flathead			1	2	Flathead			43	86
Gallatin		1	6	12	Gallatin		1	56	117
Granite		2	25	80	Granite			21	43
Jefferson			7	20	Jefferson			13	26
Lewis and Clarke ..	1	30	23	196	Lewis and Clarke ..		4	28	86
Madison			24	48	Madison			82	164
Meagher			1	2	Meagher			56	113
Missoula			17	80	Missoula			19	38
Park			14	28	Park			22	44
Ravalli			13	26	Ravalli			30	60
Silver Bow					Silver Bow			6	12
Sweet Grass		3	27	73	Sweet Grass		4	15	53
Teton		1	22	49	Teton		6	33	66
Valley		1	191	287	Valley		2	75	160
Yellowstone		5	44	113	Yellowstone		30	63	276
Totals		12	123	868	Totals		177	1,186	\$3,987
February.					April.				
Beaverhead			45	\$104	Beaverhead			70	\$152
Broadwater			3	6	Broadwater			13	26
Carbon		1	10	26	Carbon			3	6
Cascade		3	13	27	Cascade			4	19
Choteau					Choteau		73	23	360
Custer	3	20	107	302	Custer		25	51	326
Dawson		23	22	65	Dawson		4	23	86
Deer Lodge			6	15	Deer Lodge			35	70
Fergus		11	51	157	Fergus		20	24	70
Flathead			1	2	Flathead			21	43
Gallatin			1	2	Gallatin		4	43	116
Granite					Granite			23	46
Jefferson					Jefferson			21	43
Lewis and Clarke ..	34	20	178	69	Lewis and Clarke ..	5	2	11	43
Madison		1	23	46	Madison			30	60
Meagher					Meagher		19	30	110
Missoula					Missoula			47	94
Park					Park			21	43
Ravalli		7	47	125	Ravalli			15	30
Missoula					Silver Bow			9	18
Park		1	20	40	Sweet Grass		7	29	117
Ravalli					Teton	15	5	121	297
Silver Bow					Valley	19	7	106	247
Sweet Grass		11	30	96	Yellowstone	37	12	122	288
Teton		3	14	35	Totals	191	164	1,874	\$4,694
Valley		2	29	59					
Yellowstone		9	105	253					
Totals		3	105	674					

* Old law claims.

May					July				
Counties.	Wolf Pups	Wolves	Coyotes	Amount.	Counties.	Wolf Pups	Wolves	Coyotes	Amount.
Beaverhead		2	121	152	Beaverhead			25	376
Broadwater			17	34	Broadwater			15	30
Carbon		3	37	60	Carbon	2		13	30
Cascade	15	2	40	123	Cascade	25	6	77	232
Choteau	89	49	205	1,153	Choteau	85	19	467	1,079
Custer	28	11	110	227	Custer			91	
Dawson	49	15	61	286	Custer	174	23	67	506
Deer Lodge			66	110	Dawson	34	65	105	553
Fergus	20	20	103	348	Deer Lodge			10	30
Flathead			3	6	Fergus	69	22	94	284
Gallatin			71	53	Flathead			7	14
Granite	2	20	3	10	Gallatin			10	30
Jefferson			12	26	Granite				
Lewis and Clarke	13	24	36	205	Jefferson			11	22
Madison			94	136	Lewis and Clarke	3	13	20	39
Meagher	1	19	41	48	Madison			26	70
Missoula			4	8	Meagher	4	8	36	36
Park	1	20	71	30	Missoula			7	14
Ravalli		12	7	24	Park	1	26	23	23
Silver Bow		7		14	Ravalli			13	23
Sweet Grass	2	46	162	162	Silver Bow				
Teton	85	9	239	272	Sweet Grass	1		9	30
Valley	43	10	223	582	Teton	14	4	246	540
Yellowstone	22	11	50	218	Valley	5	5	232	237
Yellowstone					Yellowstone	22	14	75	284
Totals	408	150	1,798	\$5,149	Totals	374	155	1,745	\$5,022

June					August				
Counties.	Wolf Pups	Wolves	Coyotes	Amount.	Counties.	Wolf Pups	Wolves	Coyotes	Amount.
Beaverhead		1	85	121	Beaverhead		1	21	367
Broadwater					Broadwater			12	27
Carbon			27	54	Carbon	2		2	19
Cascade	14	6	30	226	Cascade	2	2	15	61
Choteau	170	29	738	2,673	Choteau	3	12	264	620
Custer	146	21	129	723	Custer	120	63	261	393
Dawson	2	46	167	167	Dawson	4	1	41	26
Deer Lodge		16	12	22	Deer Lodge				
Fergus	245	18	121	327	Fergus	22	9	20	137
Flathead			4	8	Flathead			4	8
Gallatin			29	78	Gallatin			19	20
Granite			6	14	Granite			2	14
Jefferson			1	2	Jefferson			1	2
Lewis and Clarke	14	9	14	26	Lewis and Clarke	20	2	20	206
Madison			21	36	Madison			5	10
Meagher	5	8	32	39	Meagher				
Missoula			5	10	Missoula				
Park					Park			12	24
Ravalli		12	7	24	Ravalli				
Silver Bow		7		14	Silver Bow			1	2
Sweet Grass	4	5	20	24	Sweet Grass			27	74
Teton	67	2	260	370	Teton	11	4	60	126
Valley	40	10	223	582	Valley	4	4	79	178
Yellowstone	22	11	50	218	Yellowstone	1	20	20	20
Totals	779	129	2,220	\$5,917	Totals	156	105	674	\$2,672

* Old law claims.

SEVENTH ANNUAL REPORT OF BUREAU

September.					November.				
Counties.	Wolf Pups	Wolves	Coyotes	Amount.	Counties.	Wolf Pups	Wolves	Coyotes	Amount.
Beaverhead			13	13	Beaverhead		1	2	\$100
Broadwater				6	Broadwater			13	26
Carbon			1	1	Carbon		1	25	67
Cascade			13	13	Cascade		2	19	94
Choteau	5	15	60	210	Choteau		25	97	273
Custer	74	6	39	254	Custer		77	345	1,123
Dawson	5	60	30	433	Dawson		1	123	693
Deer Lodge			2	4	Deer Lodge			1	23
Fergus	30	3	26	151	Fergus		27	196	631
Flathead				1	Flathead			26	53
Gallatin			1	2	Gallatin			42	94
Granite			1	2	Granite			9	27
Jefferson	9	2	11	50	Jefferson			20	40
Lewis and Clarke			11	23	Lewis and Clarke		2	15	45
Madison			13	3	Madison			95	70
Meagher	5	6	12	2	Meagher		9	40	125
Missoula			1	18	Missoula			5	10
Park			8	21	Park			18	33
Ravalli			1	23	Ravalli			25	30
Silver Bow			6	38	Silver Bow			8	15
Sweet Grass			47	94	Sweet Grass		5	61	137
Teton			31	57	Teton			14	30
Valley					Valley		3	67	120
Yellowstone					Yellowstone		5	12	511
Totals	130	96	435	\$1,615	Totals	42	345	1,495	\$4,320
October.					December.				
Beaverhead			43	306	Beaverhead		2	100	\$220
Broadwater			15	27	Broadwater			15	34
Carbon			21	50	Carbon		5	30	86
Cascade			15	51	Cascade		1	43	91
Choteau			7	61	Choteau		22	217	594
Custer	94	30	190	610	Custer		35	49	281
Dawson			61	143	Dawson		4	94	138
Deer Lodge			23	44	Deer Lodge			11	23
Fergus	6	34	120	450	Fergus		4	47	130
Flathead			6	13	Flathead			33	66
Gallatin			11	22	Gallatin		1	73	151
Granite			6	12	Granite			17	34
Jefferson			11	23	Jefferson			24	43
Lewis and Clarke	5	3	70	150	Lewis and Clarke			25	35
Madison			5	10	Madison			25	50
Meagher	3	3	8	26	Meagher		1	8	114
Missoula			1	3	Missoula			31	191
Park			3	6	Park		3	41	92
Ravalli			2	4	Ravalli			30	86
Silver Bow			11	42	Silver Bow		3	1	22
Sweet Grass	4	5	190	240	Sweet Grass		19	61	172
Teton			86	126	Teton		9	7	59
Valley			43	144	Valley		13	278	646
Yellowstone					Yellowstone		6	130	282
Totals	100	111	525	\$2,447	Totals	33	206	1,901	4,943

* Old law claims.

TOTALS.

COUNTIES.	Wolf Pups	Wolves ..	Coyotes ..	Amount ...	COUNTIES.	Wolf Pups	Wolves ..	Coyotes ..	Amount
Beaverhead	6	684	*90	1,423	Jefferson	1	142	*1	303
Broadwater	1	103	*2	217	Lewis and Clarke ..	54	90	*11	1,113
Carbon	2	13	*3	455	Madison	1	277	*2	792
Cascade	60	51	*1	1,062	Meagher	12	67	*2	1,180
Choteau	373	196	*21	6,517	Missoula	3	189	*2	294
Custer	716	400	*10	7,006	Park	3	189	*2	402
Dawson	93	274	*1	2,932	Ravalli	1	118	*2	351
Deer Lodge	...	...	*2	413	Silver Bow	1	49	*2	103
Fergus	428	195	*10	2,932	Sweet Grass	5	43	*2	815
Flathead	3	139	*1	318	Teton	196	40	*130	2,314
Gallatin	10	202	*10	637	Valley	91	48	*2	2,748
Granite	...	85	...	300	Yellowstone	215	123	*17	2,953
					Totals	2,947	1,585	12,764	\$40,238

* Old law claims.



The Sheep Industry.

Montana is Now the Largest Wool Producing State in the Union and Ranks Close to First in the Number of Sheep—Reports on the Industry.

The report of the Board of Sheep Commissioners for 1899, shows a total of 3,186,742 sheep in the state, valued at \$8,302,944, at an average assessment of \$2.62½ per head. The estimate of the National Association of Wool Manufacturers of Boston places the number of sheep in Montana at 3,218,802. By either estimate Montana is easily the leading sheep raising state of the Union. Estimating the wool product of the state at not far from twenty million pounds, and the average price at 16 cents per pound, would indicate something over \$3,000,000 received from that source. From the lamb crop and sales of mutton half as much more might be added, making the total yield something near \$4,500,000.

The commission gives the following as made from their returns for 1899:

COUNTY.	No. of Sheep on hand March 1, 1899	No. Sheep brought in from other states since Mar. 1, 1899....	No. of Lambs docked since Mar. 1, 1899	No. of Lambs and Sheep slaughtered, sold or shipped of state since Mar. 1, '99
Beaverhead	137,614	14,460	35,000	7,555
* Broadwater	34,304		19,795	1,800
Carbon	97,502	2,000	50,000	
Cascade	189,067		80,670	23,433
Choteau	521,763	11,400	175,000	79,940
Custer	374,010	5,450	144,060	9,670
Dawson	137,000	250	44,525	13,943
Deer Lodge	69,400	9,370	27,482	13,915
Fergus	636,534	12,360	164,435	64,270
* Flathead	136			
Gallatin	21,368	2,000	8,730	1,000
Granite	8,867		2,900	
* Jefferson	2,530		1,110	
* Lewis and Clarke ..	62,075		19,000	12,000
Madison	68,130		14,435	400
Meagher	374,800	50,000	98,000	23,000
* Missoula	2,943			
Park	61,415	4,000	15,000	30,000
Ravalli	25,046	3,316	11,035	1,000
Silver Bow	3,582	2,100	1,215	13,131
* Sweet Grass	262,969	50,000	68,700	40,000
* Teton	345,369	37,300	87,334	20,350
Valley	61,535	30,000	23,496	4,000
Yellowstone	1269,522	98,000	47,536	60,000
Totals	3,482,151	217,586	1,147,742	397,914

* Figures from returns to the State Board of Equalization.

** Rams.

***These sheep were driven into Valley County for shipment.

! This number includes about 50,000 sheep which are being fed for the mutton market, and also about 30,000 head on the Indian Reservation which are probably not listed elsewhere.

COUNTY.	No. lbs. of pelts sold since Mar. 1, 1899	Price received for pelts per pound	No. lbs. of wool sheared since March 1, 1899	Average price received for wool per pound	No. of Sheep destroyed by wolves and coyotes during year
Beaverhead	7,000	8	963,297	15	2,336
Broadwater	10,000	9½	156,446	10½	900
Carbon	30,000	8½	850,000	16½	1,684
Cascade	23,150	8 to 10½	1,373,628	14 to 20	482
Choteau	27,840	10½	4,614,186	17½	
Custer	30,423	8	2,701,649	16	6,978
Dawson			1,037,410	17	
Deer Lodge	14,760	8½	446,300	17½	430
Fergus	302,000	9 1-10	3,226,049	17 1-10	4,820
Flathead					
Gallatin	4,000	10	149,543	16	300
Granite			25,000		
Jefferson			21,500		
Lewis and Clarke	4,000	7	400,000	17 3-5	750
Madison	4,000	7	280,303	15½	406
Meagher	74,000	9	1,676,000	16.50	1,800
Missoula					
Park	10,000	8 to 11	200,000	17½	600
Ravalli			172,860	14½	116
Silver Bow	100,000	7	18,270	25	
Sweet Grass	23,500	9	1,735,733	16½	1,000
Teton	18,700	9½	1,612,300	17.07	1,800
Valley	9,907	8½	426,460	15½	800
Yellowstone	34,897	7 to 10	1,644,611	15½	1,000
Total	684,867	8½	22,418,661	16½	25,516
Av.					

* One stock-master lost 175 head from blood-poisoning at shearing time.

** Estimated.

In a report made last year to the sheep commission, dealing especially with the condition and diseases that endanger the flocks of Montana, Dr. M. E. Knowles, the able state veterinarian, said: "It is the common belief among sheepmen that the disease known among sheep as foot-rot cannot become a part of the sheep diseases in this state. It is my belief that this is an erroneous idea, and that on general principles it is always a dangerous thing to juggle with fire. There is no doubt that some few cases of foot-rot have been imported into Montana during the past year or two, and that these sheep did not come in contact with others in a manner to spread the infection is probably not due to the surveillance of those that were interested. It is my belief that any contagious or infectious disease can exist in Montana, as well as it may elsewhere, and that the continued importation of sheep suffering from this disease will ultimately prove disastrous to your interests, there can be no question. The fact is that foot-rot has no geographical limit. It is said, however, to have only been known in Europe since the end of the last century, and to have been observed in Merinos imported into England from Spain. It was taken across the Pyrennes into France, and prevailed extensively therein during 1791. In Australia, it is exceedingly common. Randall says that it is common in America, but claims that it prevails mainly among the Merinos, and to a lesser extent with the coarser varieties.

"The disease is an inflammation and ulceration of the vascular structures

of the feet. It is manifested by a separation of the hoofs, lameness, and other diseased alterations, the feet emanating a strong odorous matter, which contains the principle of infection. It first affects one, two or more feet, but in its ordinary manifestation only one, passing slowly to the others. There will be observed early in its onset a lameness in the affected limb, ordinarily a front one; however, if examined at this period, perhaps no indication of the disease will be observed. In a few days the hoofs are found painful and hot on manipulation, and particularly so when the claws are separated, the skin about the superior part of the hoof and between the claws looks red, smooth pimples, pustules or vesicles, and a foul-smelling, cheese-like or oily matter covers the part. In a short time, if the skin is examined, between the exudation you will find a number of small ulcers which contrast with the white-



A MONTANA MONEY MAKER.

ness of the surrounding parts and gradually run together. The discharge is of a yellow color, and sticky, possessing much smell of ammonia. In two weeks to a month, separation of the upper part of the hoof takes place toward the heel, and a greasy, dark colored, foul, odorous fluid is secreted. The separation of the hoof going on from before to behind, the sides, however, remaining unaltered. In from 30 to 35 days the heel, in many cases, has nearly recovered, but between the toes the ulceration is extending, is deeper, and causes great pain. If loosened horn be removed, the living textures are seen to be swollen, of a bright red color, and covered with the same odorous matter already mentioned. The suffering is increased, and the animal dull and feverish, the lameness being so intense that the animal hesitates to put its foot on the ground, and if all feet be involved, it assumes a recumbent

position. Finally the sole becomes separated, and the entire horny case comes off, or is only attached by a few small parts of new horn. The hoof so shed may in time be reproduced, but only to be again shed, if the secreting tissues have not completely recovered. There is an exaggerated secretion of horny matter, and the foot becomes deformed, tuberos in shape, crooked and hard.

"It is not uncommon to see the disease in the region of the pastern, and if the malady continues, the puss becomes bloody and abundant, ultimately the tendons and ligaments become involved, and slough away in shreds, and the bone of the foot is involved in decay. The biflex canal is inflamed and



A SHIPPING CORRAL.

swollen, and suppurates, the puss reaching the joint, the capsule of which is destroyed, and the second bone of the foot may be implicated in the mass of disease. In such cases the pain is intense, appetite lost, and the animal falls into marasmus and dies.

"The loss from this disease will depend upon circumstances, but where it is carefully treated and handled, should not be large; but from an economical point of view, it is a grave disease from the loss it occasions in the condition of the band, and from its long duration therein. The virus of this disease will preserve its activity for a long period.

"When the disease appears in a band of sheep, the healthy should at once be separated from the diseased, and taken to a locality known not to be in-

fect. The healthy should not be permitted near the diseased or suspected, nor should they be allowed to use the same trails, drink out of the same watering place, or occupy the same pastures. The exposed should be examined several times a week, and any that show the slightest indication of the disease should be at once taken to the hospital band. Those positively known to have been exposed to the disease should be compelled to walk through a suitable trough, filled with some antiseptic solution, so that their



IN THE CORRAL.

fect and legs may be thoroughly disinfected. The measures to be observed are not those of cure, but of prevention, by the observance of strict quarantine regulations, and it is simply my desire, in mentioning this disease at this length, to impress upon your minds, and the minds of the Deputy Sheep Inspectors of the different counties, the necessity for looking carefully after other diseases than scab.

"I discovered a limited outbreak of sheep-pox, in a band of bucks, that were shipped from Ohio, and shortly after their arrival developed the disease, and during its prevalence he was unfortunate enough to lose about 10 per cent of the importation. He mixed these bucks with his native band of bucks, all of which became affected with the disease, but apparently they had it much milder than the imported bucks. This is a disease of grave importance to the sheep man, for should it become prevalent throughout our state, and the losses anything to compare with the Continental losses, it would make the sheep

industry a very unprofitable one. The losses in localities on the Continent have reached as high as 75 per cent, and rarely are less than 10 to 15 per cent. Friedberger and Frohner give the symptoms as follows:

"After a period of incubation of from four to seven days on the average (minimum 2 to 3 days) the disease is established, the animals are feverish, depressed and weak. They tremble, carry their heads low, cease to eat and to ruminate. The temperature is elevated, 41 to 42 C., and sometimes goes beyond these figures. The circulation and respiration are accelerated, the membrane of the eye red, and there is a discharge from the nose and eyes, but never abundant. From 24 to 28 hours later, the regions devoid of hair and those where the wool is not thick, about the head and the neighborhood of the eyes, nose and mouth and internal surface of the front and hind limbs, the chest and the belly, present red points, then soon afterward papules of the same color. The skin eruption is more rarely observed upon regions where the wool is abundant. Sometimes you will observe isolated pimples on the mucous membrane of the mouth and the throat. Ordinarily the skin eruptions produced by several successive developments do not present the same characteristics on the different regions. On the fourth or fifth days the papules bleach in their center, become vesicles, and are surrounded by a red circle or zone. The skin in the neighborhood seems to be hardened and swollen; this is particularly true about the head and surrounding the eyes, and after a few days the center of the vesicle becomes umbilicated, and their dimensions gradually augment. They contain a lymphoid liquid, limpid, and of a reddish yellow color, and 6 or 7 days after the eruption the vesicle reaches maturity. During the transformation you will observe the symptoms of a general febrile infection, accompanied by localized catarrhal troubles, the fever goes up; the membranes of the eyes, nose, throat and lungs are inflamed. The eyes and nose are the seat of mucopurulent secretions; the sick animals slobber; are seized with regurgitations, cough, the breathing becomes feeble, and sometimes a diarrhoea is noticed. The head becomes greatly swollen, and the skin perspiration has a foul odor. Finally the pustules dry up, the skin is retracted, and scabs, at first yellow, become a blackish brown and fall off, leaving small depressions or scars, which sometimes remain bare, but which afterwards are thinly covered with wool. Under ordinary conditions, the total operation of the disease is not more than three weeks. The evolution of sheep-pox is, however, not always regular. Even where it exists in the most fatal forms, it assumes, oftentimes, a very benign form, with rather an abortive course, the pustules existing in only a small number, and the fever but slightly marked."

"There are a number of forms of the disease and differences in their manifestation that would be uninteresting to you, but by the above I hope to give you an idea of the gravity of the disease and the importance of our watching that it does not gain a permanent hold in our state. It is said in the regular evolution of the disease, that the mortality ranges from 10 to 20 per cent. in the serious form; 50 per cent. and often greater in the confluent or hemorrhagic forms, or when the animals are old and feeble, or among sucking lambs the prognosis is always unfavorable. Inoculation against

this disease of necessity is practiced throughout the Continent, and the mortality of inoculation is said to be often nil; ordinarily, however, it is about 2 per cent.

The report of the Board of Sheep Commissioners for this year says that an effort has been made to get some light on and relief from the losses annually sustained by the sheep eating poisonous plants. In response to a request from the commission Professors Chestnut and Wilcox, expert botanists and chemists, were sent out by the department in May, and the returns show that the gentlemen accomplished valuable results. Of sixty plants examined, six were found to be poisonous, and a proved remedy was secured



BRINGING WOOL TO MARKET.

for three of these. The poisonous weeds eaten by sheep and for which a cure has been found, are the Larkspur, Lupine, Wild Parsnip and Death Camas, and for these 4 grains of permanganate of potash in 6 ounces of water is given. For cattle the dose is increased to 20 grains and a half pint of water. A supply of potash may be carried by the herders and administered when necessary.

During November of this year the state was visited by Dr. Rowe of Ogden, who came to confer with State Veterinarian Knowles relative to the appointment and location of two inspectors by the general government, for the state of Montana. Though all of the western wool-growing states have had these inspectors for the past couple of years, it had not been considered necessary for Montana, on account of the excellent health of its flocks, and as

these inspectors only inspect shipments out of the state, their services were better applied in the inspection of sheep coming into the state from other localities. The appointment of the inspectors, however, is now welcomed by the local sheep authorities, and in fact they were secured through their influence, as there will now be an authoritative head with which outside inspectors can keep in communication with shipments of sheep to this state, and through them allow the state authorities to watch importations the closer.

The latest estimates of the number of sheep in the country, made by the National Association of Wool Manufacturers, Montana is credited with 3,717,160 sheep. New Mexico has the largest number of sheep, and it has but 70,000 less than Montana. But while New Mexico is credited with 16,093,424 pounds of unwashed wool, Montana is credited with 26,000,000 pounds, making this by far the greatest wool producing state in the Union.

An item of especial interest to the wool-growers of the state is the proposed erection of a woolen mill at Big Timber. Ground has been broken for the buildings and it is expected that the industry will be in full operation the latter part of 1901. The success of this institution, which is inevitable under competent management, will be the cause of the early establishment of other like plants at favorable locations throughout the state.

The Sheep commission find that there is a great shortage of warehouse facilities at the wool-shipping points of the state. In several of the more prominent wool-growing counties of the state the sheep men have organized local wool-growers' associations, the object being to secure mutual protection.

The commissioner's report says that reports from the several counties show in detail that the health conditions are invariably good and that Montana stands foremost in this respect, and this fact the board ascribes not only the naturally healthful conditions of the state for his particular industry, but to the fact that the state has good laws regulating the importation of sheep into the state and to the efficient and energetic services of the State Veterinarian Dr. M. E. Knowles. The report shows that in each instance where disease appears among the flocks of the state that it was the result of imported infection, and it details the procedure for its prompt and complete eradication.

The basis of calculation showing the number of sheep in each state is taken from the annual report of the Department of Agriculture for the United States, and these are principally based on census figures and annually revised. The census reports in this feature, so far as they relate to Montana, are not to be obtained in time for this report. The average weight of the fleeces in each state and the shrinkage are the result of direct inquiry of the individual wool-growers, the dealers in wool and the manufacturers, and the state and county officials of the several states. The estimate of the clip of the United States for 1900 is as follows:

States and Territories.	No. of sheep, April 1, 1896	Average weight of fleece, 1896	Per cent of shrinkage, 1896	Wool Washed and Unwashed	Wool Account
				Pounds	Pounds
Maine	277,186	6	40	1,433,009	699,995
New Hampshire	74,283	6.50	35	496,480	232,431
Vermont	164,858	6.75	35	1,112,798	489,699
Massachusetts	39,632	6	45	237,798	123,692
Rhode Island	19,844	5.50	43	67,098	38,042
Connecticut	31,304	5.50	41	171,632	101,257
New York	819,098	6	50	4,314,538	2,467,264
New Jersey	41,654	5	47	208,270	120,294
Pennsylvania	777,677	6	50	4,006,082	2,333,031
Delaware	12,230	5	46	61,190	32,046
Maryland	132,341	5	47	696,703	363,254
Virginia	253,072	5	43	1,780,380	1,003,490
North Carolina	223,497	5	43	1,117,496	636,967
South Carolina	64,268	5	44	281,290	157,632
Georgia	271,534	4	40	1,006,136	651,632
Florida	70,064	4	42	280,266	143,549
Alabama	180,632	4	40	642,530	386,517
Mississippi	204,745	4	41	813,980	483,120
Louisiana	106,621	4.50	39	478,286	267,602
Texas	3,517,636	6.25	70	14,465,235	4,845,697
Arkansas	108,636	4.25	40	441,300	264,728
Tennessee	286,676	4.25	40	1,012,469	601,431
West Virginia	401,632	5.50	47	2,308,976	1,170,767
Kentucky	614,642	5.25	38	2,701,370	1,675,162
Ohio	2,754,490	5.75	51	15,532,380	7,700,900
Michigan	1,240,464	6.70	53	3,961,005	4,210,206
Indiana	647,330	6.50	55	4,260,094	2,337,563
Illinois	618,087	6.50	50	4,004,341	2,002,121
Wisconsin	738,040	6.50	51	4,718,380	2,812,497
Minnesota	400,157	6.75	55	2,761,900	1,342,214
Iowa	536,644	6.50	55	3,812,196	1,715,934
Missouri	570,138	6	50	2,430,700	1,710,284
Kansas	270,716	5	47	2,105,723	714,080
Nebraska	315,967	7.75	65	2,448,462	965,963
South Dakota	373,717	6.50	60	2,422,061	969,064
North Dakota	363,512	6.50	60	2,364,228	994,531
MONTANA	2,717,190	7	63	26,020,129	9,627,444
Wyoming	2,780,546	7.75	67	21,649,231	7,111,246
Colorado	2,128,508	6.25	67	12,305,175	4,390,042
New Mexico	2,786,088	4.25	54	18,092,484	7,408,976
Arizona	1,003,942	7.00	72	7,029,595	2,106,273
Utah	2,361,917	6.25	65	14,126,981	4,947,943
Nevada	612,267	7.50	69	4,532,908	1,424,400
Idaho	2,676,240	7.50	68	19,321,300	6,122,978
Washington	769,389	8.50	73	6,464,898	1,742,621
Oregon	2,351,374	8	70	12,810,122	6,642,063
California	1,907,430	7	66	12,363,019	4,529,682
Oklahoma	22,422	6.75	65	212,916	86,621
Total	40,367,819	6.46	61.1	269,972,315	101,024,287
Pulled Wool				26,002,208	17,126,223
Total Product, 1896				243,970,107	83,898,064

This total shows an increase over 1889 of 16,445,291 pounds, and as compared with 1897 of 50,088,882 pounds.

The net increase in the number of sheep, as compared with the total number in the country in 1896, is 3,803,413, or 10 per cent. The rate of increase each year is shown in the following table:

YEAR.	Number.	Annual Increase.	
		Number.	Per cent.
1896	35,454,405		
1897	34,784,287	41,680,115	4.6
1898	35,071,914	387,627	2.6
1899	36,905,497	1,833,583	3.6
1900	40,267,818	3,362,321	9.1

* Decrease.

Practically all of this increase has taken place in the thirteen so-called territorial states of North Dakota, South Dakota, Montana, Wyoming, Colorado, New Mexico, Arizona, Utah, Nevada, Idaho, Washington, Oregon and California. The net increase in these thirteen states as compared with 1896 was 5,749,114, or 23.3 per cent., as shown by the following table:

YEAR.	Number.	Annual Increase.	
		Number.	Per cent.
1896	18,871,006		
1897	19,000,185	129,179	.7
1898	20,114,001	1,106,416	.5
1899	21,350,228	1,236,027	5.8
1900	24,620,720	3,270,492	12.2

The average weight of fleeces for the United States is 6.46 pounds. On the basis of the authority stated, with no allowance made for pulled wool, the product for 1900 is 248,452,437 pounds. The estimate of the American Wool Reporter brings the average fleece weight up from 6.04 in 1891 to 6.46 in 1900, and the increase of weight is credited by them to a change of breeds, and to the increasing preponderance of heavy shrinkage wools that are classed as territorial.

The estimates of wool production for thirteen years have been as follows, together with the scoured wool equivalents for the same period:

FLEECE AND PULLED WOOL, WASHED AND IN THE GREASE.

Year.	Product. Pounds.	Decrease. Pounds.	Increase. Pounds.
1893	301,375,121	233,329	
1894	295,779,479	6,096,642	
1895	300,474,804		13,695,327
1896	307,403,507		2,078,703
1897	323,012,405		28,608,898
1898	342,588,125		15,575,720
1899	325,210,712	22,377,413	
1900	324,286,726	30,912,386	
1893	272,674,705	21,622,012	
1894	260,153,261	12,521,447	
1895	300,720,684		7,567,425
1896	272,191,320		5,470,546
1897	282,626,621		10,435,301

SCOURED WOOL.

Year.	Product. Pounds.	Decrease. Pounds.	Increase. Pounds.
1888	136,591,955	3,964,730	
1889	134,765,350	1,796,605	
1890	139,638,230		4,872,879
1891	139,336,703	301,527	
1892	145,300,318		5,973,615
1893	151,108,776		5,808,458
1894	140,392,366	10,811,508	
1895	135,712,690	14,673,576	
1896	118,296,979	10,424,111	
1897	111,965,967	3,918,082	
1898	111,061,681		256,584
1899	113,968,468		2,896,787
1900	118,232,130		4,264,662

By means of the above figures, the Treasury Department's statistics of imports, and the Boston "Commercial Bulletin's" record of supplies on hand January 1st last, we are enabled to reach an approximate estimate of the available supplies of wool of all descriptions for the year 1900-01, in comparison with the similar statements for previous years:

	1897. Pounds	1898. Pounds	1899. Pounds	1900. Pounds
Wool clip.....	259,153,351	206,730,064	372,191,329	268,636,631
Domestic wool on hand January 1.....	123,688,000	127,306,000	235,057,363	123,343,500
Foreign wool on hand January 1.....	28,844,000	49,581,000	96,131,327	25,265,000
In bond January 1	*	34,962,514	57,904,367	44,969,000
Foreign wool imported January 1 to July 1	292,963,097	68,363,967	45,324,613	96,975,523
Total	702,668,428	537,300,135	667,100,095	573,064,304

* Under the Wilson law there was no wool in bond.

Unaccounted for in the above statement are the supplies now in the warehouses of manufacturers, regarding which it is impossible to obtain any definite information. There is reason to believe that these stocks are lower than they have been at any time since 1897, and no longer any considerable factor in the situation. Nevertheless, the available supplies remaining at this date outside of the above are ample to meet the probable requirements of the mills, prior to the movement of the clip of 1901.

The following statement shows the quantity of wool retained for consumption in the United States for each year from 1890 to date. As the wool clip of the year reaches the market during the governmental fiscal year, the clip of any year is added to the imports of the fiscal year beginning July 1st preceding, so that the total consumption for a series of years is accurately indicated by this combination, however it may differ from the available supplies in any one year of the series.

Fiscal Year	Total Imports.	Exports, Domestic and Foreign.	NET IMPORTS.		Product'n	Retained for Consumption.	FINE WOOL.	
			Classes I. and II.	Class III.			Retained for Consumption.	Per cent. of Foreign.
	Pounds	Pounds	Pounds	Pounds	Pounds	Pounds	Pounds	
1890-91 ..	130,305,548	2,930,046	26,783,501	80,352,034	308,474,056	435,843,459	345,906,436	10.03
1891-92 ..	140,670,952	3,210,019	53,350,197	83,213,962	307,101,507	463,563,140	360,340,219	14.31
1892-93 ..	172,423,338	4,310,495	46,180,063	122,088,119	333,013,408	501,141,748	379,115,639	12.13
1893-94 ..	95,152,695	6,497,654	7,167,200	43,007,798	348,536,138	397,196,089	355,185,271	2.03
1894-95 ..	304,081,850	6,622,190	86,338,318	105,402,607	335,310,712	484,722,489	419,319,921	22.46
1895-96 ..	380,911,479	12,973,217	136,946,835	97,913,632	394,306,728	613,385,932	414,317,109	30.64
1896-97 ..	360,953,095	8,700,686	625,253,736	113,141,457	372,474,709	614,087,365	508,486,908	46.84
1897-98 ..	132,795,302	3,695,971	47,490,033	82,610,437	359,153,351	386,338,583	306,512,145	18.50
1898-99 ..	78,736,309	14,086,326	3,349,670	60,947,423	266,720,694	336,361,656	306,387,136	1.35
1899-1900 ..	105,913,455	7,912,627	44,630,424	106,535,753	272,191,330	420,197,238	314,671,445	14.30
1900-01 ..	.....	.....	.....	.....	288,096,091	.....	.....	.....

The yearly exports of domestic wool have never exceeded 500,000 pounds, except as follows:

1893-4	530,247 pounds	1896-7	5,371,535 pounds
1894-5	4,279,100 pounds	1898-9	1,633,419 pounds
1895-6	6,945,981 pounds	1899-1900	2,300,308 pounds

The Bulletin of the National Association of Wool Manufacturers discusses the situation, and finds that the local market follows the foreign, and that there has been a very material falling off in the home consumption of woollen goods, and provides the local grower with some food for thought in the following article:

"The course of the wool market since the publication of the last clip estimate has been most erratic. Beginning in April, 1899, there was a rapid and continuous rise in prices for all grades of wool, which continued until December. Ohio XX, which sold in April for 26½ cents, was selling in December at 39 cents, and from that time a gradual decline set in, and the present prices are about on a parity with those of April, 1899. The domestic market has very closely followed that of London, in all these unexpected movements. At the January London sales, which opened on the 16th, there was a decline of 7 to 10 per cent., and the later sales of the year showed the market so heavy that the management of the Wool Exchange abandoned the fifth series of sales at the middle of September, substituting for that sale and the customary November sales a series of auctions, commencing October 9. The purpose of this unprecedented move was avowedly to check the phenomenal and unexplainable downward movement by feeding the trade with slow supplies. The result was not particularly flattering to the originators of this scheme for artificially strengthening the market. At the October sales, despite a large attendance, there was a lower basis for all descriptions of wool except coarse crossbreds. Merinos registered a further loss of from 10 to 15 per cent., indicating very plainly that notwithstanding the great shrinkage in the supply of these wools, about which so much has been written during the past two years, the markets have accommodated themselves to the change, and the demand has correspondingly fallen off. "The London Economist" of October 13 makes these interesting comments upon the situation at the opening of the October sales:

"The decision has apparently been arrived at by the banks and brokers

in London to allow the whole of the enormous quantity of wool now in their hands to be put up practically without reserve at the present series of auctions in Coleman street. This amounts to 366,000 bales, worth, even at today's low prices, probably over £10 per bale, and therefore requiring nearly four millions sterling to "lift" it. However, the policy of holding back 100,000 bales from the last series has had a most depressing effect upon the trade, and has completely defeated the object in view. Values have steadily declined, and for merino now in this market are fully 15 per cent. below the rates current in July. On the other hand, strong cross-breds, which had then almost reached the bottom, are today about on a par with the close of last sales. The drop in London, therefore, is not more than was expected, and the first three nights have shown that the trade is ready to buy freely upon the basis established so far, and it may be that the tone will improve as the sales progress. Low prices must prevail for a long while if confidence is to be restored and business to regain its normal volume; and the belief that at last this fact is realized in London has already done something to produce a more hopeful spirit here. A serious suspension in Philadelphia is testimony to the close and organic dependence of the American wool trade upon conditions here, in spite of a prohibitive tariff."



A SHEEP CAMP.

"Undoubtedly the state of the domestic wool market is a reflection of that abroad, and it is not necessary to look for local causes to explain it. Nevertheless it is true that certain conditions prevailing here are peculiar to the United States, and are seen in market conditions. Wool prices undoubtedly went higher in the fall of 1899 than there was any warrant for. The boom in the market for manufactured goods, as we now know, was overdone, and the excessive production of the season was in progress at a time when the prophets were actually predicting a scarcity in the supply of the raw material. In truth, there never was any approach to a scarcity, and at present, owing to

the curtailment of production which has followed the backward demand for goods, there is an actual redundancy of supplies; so that no return to the wool prices of 1899 can be looked for. The estimated per capita consumption of wool in 1890, was 9.07 greasy pounds against 8.52 in 1880. Assuming the clip of 1899 at 272,191,330 pounds, there was retained for consumption in the United States in 1900, after deducting all exports from the imports, a total of 420,197,228 pounds. The value of imported fabrics for the year was \$27,000,000, which adds 81,000,000 pounds of wool, a total of 501,000,000, which, with a total population of 76,295,220 since 1890 of 2.3 pounds per capita. There has been a steady increase in the population of the country—apparently about 21 per cent. since 1890—and an enormous falling off in the value of imported woollens. Yet the supplies of wool required to meet the demand for domestic goods are no greater than they were in 1890. This is assuming also that the abnormal wool imports of the free wool period have passed into consumption, and are no longer a factor in the supplies.

In the present general prosperity of the country the people are buying goods with quite as much freedom as was ever the case; it would seem to follow, therefore, that the use of cotton goods as a substitute for woollens has been increasing of late years. The advances which the cotton manufacture has made in the direction of imitating various makes of woollens have been very great in these ten years. So also has been the advance in the use of cotton in connection with wool, and this has been stimulated by the unwillingness of the buying public to pay prices for woollens which are commensurate with the increased cost of wool since the restoration of the duty on the latter. Even with cotton at 10 cents a pound, the difference between its cost and that of wool at 50 cents a scoured pound is so great in these days as to encourage the use of more or less cotton in fabrics which will not command prices which allow a fair return, provided the material used were all wool. A duty of 11 cents a pound on wool advances its cost so materially that it is now distinctly tending to reduce its consumption in the country. It has not been possible, notwithstanding the general advance in prices, to obtain the values for woollen goods which ruled prior to the tariff revision of 1894. Yet the wool and the labor are costing just about as much as before.

RECEIPTS OF WOOL IN BOSTON IN BALES, 1895-1900.
(Boston Chamber of Commerce Reports.)

	1895		1896		1897	
	Domestic	Foreign	Domestic	Foreign	Domestic	Foreign
January	37,806	2,022	26,027	23,577	26,479	12,931
February	19,446	26,694	15,614	23,006	20,800	49,676
March	25,220	12,994	19,706	24,800	20,900	60,280
April	26,722	47,626	30,120	12,899	20,500	164,264
May	46,966	24,920	42,123	19,126	20,500	66,646
June	31,837	27,006	66,343	6,781	47,000	62,517
July	129,530	30,000	60,000	6,214	100,277	41,000
August	31,434	66,661	32,347	2,664	30,521	70
September	22,723	15,220	21,684	2,000	60,764	2,200
October	32,782	21,400	26,000	2,700	40,400	3,071
November	22,304	15,921	21,600	14,640	23,347	3,220
December	30,210	18,120	37,120	47,627	19,120	17,120
Total	577,737	226,900	442,064	211,479	520,904	611,264

SEVENTH ANNUAL REPORT OF BUREAU

RECEIPTS OF WOOL—Continued.

	1898		1899		1900	
	Domestic	Foreign	Domestic	Foreign	Domestic	Foreign
January	18,640	11,908	21,194	6,794	20,089	10,485
February	20,534	21,973	25,806	11,494	22,954	14,237
March	17,968	19,067	27,446	5,700	21,596	22,094
April	13,573	22,225	23,344	8,225	15,972	22,688
May	14,008	6,934	62,890	8,064	22,010	15,037
June	28,306	14,000	106,890	7,961	29,055	8,222
July	67,629	1,612	137,672	3,652	91,837	7,991
August	53,534	2,506	300,009	6,791	90,721	5,466
September	27,091	1,296	46,246	9,699	25,422	6,707
October	15,913	4,973	49,731	10,925	.....	.....
November	10,690	4,050	51,455	11,790	.....	.....
December	23,723	5,596	50,720	14,005	.....	.....
Total	222,221	117,226	704,208	104,348	217,627 9 mos.	112,126 9 mos.

MONTHLY SALES OF WOOL IN BOSTON FROM JAN. 1, 1892, TO OCT. 1, 1900.
(Report by T. C. O'Brien, Commercial Editor, Boston Journal.)

	1892. Pounds	1893. Pounds	1894. Pounds	1895. Pounds	1896. Pounds
January	12,575,000	16,675,000	7,761,000	12,886,000	30,694,000
February	12,460,000	16,633,000	11,294,000	14,745,800	12,080,800
March	12,460,000	10,500,000	14,402,000	15,705,000	6,238,000
April	11,969,000	13,205,000	10,111,000	11,844,000	8,502,000
May	10,680,000	7,412,000	7,061,000	11,422,000	7,758,000
June	10,749,000	5,090,000	9,797,000	29,268,000	11,301,000
July	19,875,000	3,879,000	13,575,000	32,562,000	4,178,000
August	16,242,000	4,083,000	22,446,000	20,627,000	7,153,000
September	16,200,000	14,905,000	20,420,000	19,970,000	19,071,000
October	13,123,000	8,997,000	11,814,000	22,903,000	25,774,000
November	14,950,000	13,740,000	12,115,000	15,267,000	19,472,000
December	16,120,000	9,992,000	12,400,800	12,975,000	10,682,000
	173,308,000	120,072,000	169,814,000	222,174,000	152,378,000

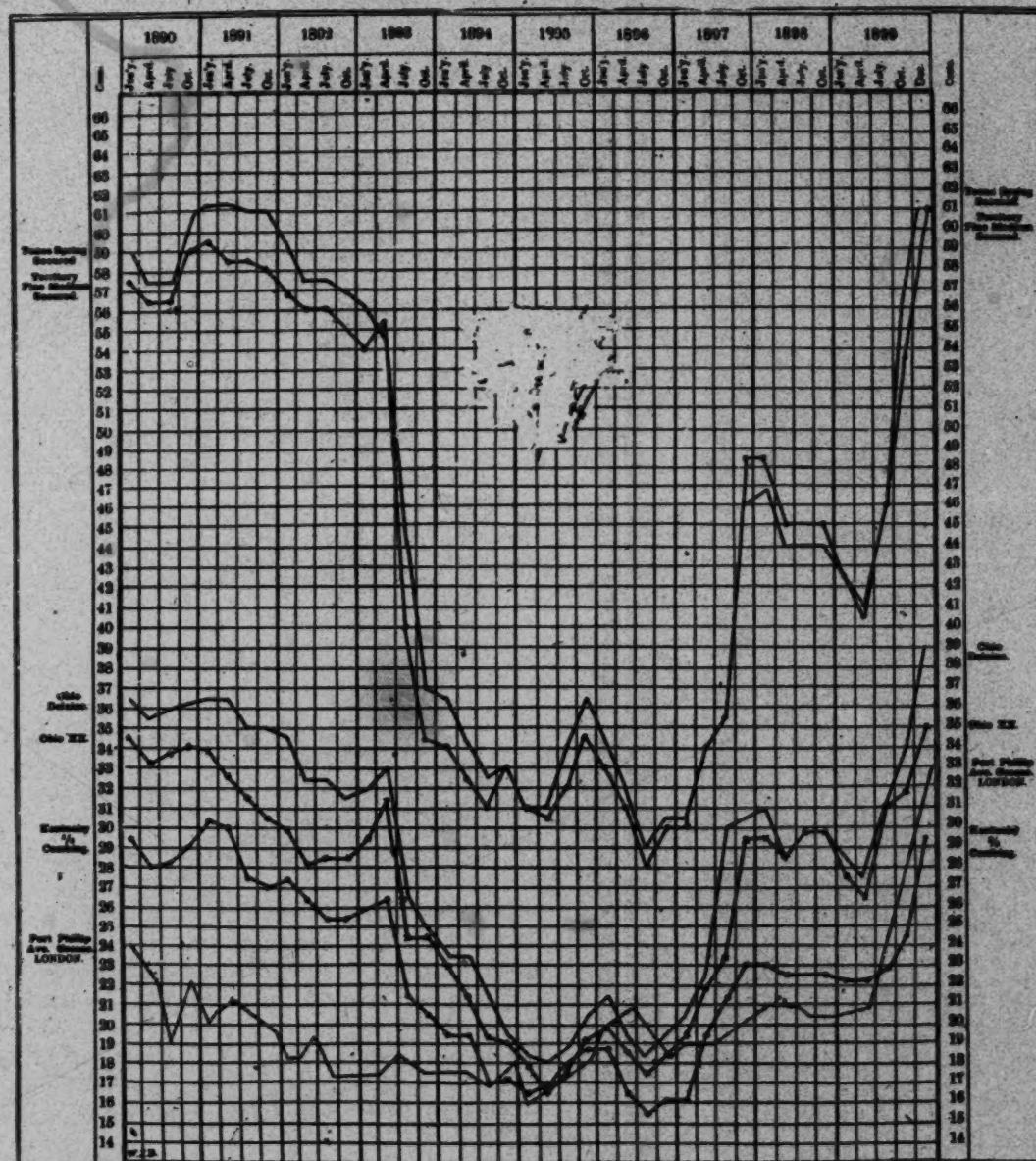
MONTHLY SALES OF WOOL IN BOSTON—Continued.

	1897.	1898.	1899.	1900.	
	Pounds	Pounds	Pounds	Domestic Pounds	Foreign Pounds
January	25,252,000	28,310,000	12,581,000	12,147,000	1,631,500
February	27,757,000	12,246,000	16,140,000	10,870,500	2,949,000
March	24,542,000	5,925,000	11,222,200	12,372,500	1,987,800
April	31,119,000	4,980,000	27,625,900	8,074,000	1,235,000
May	21,568,000	7,212,000	26,774,500	7,702,000	1,243,000
June	26,842,000	6,502,000	22,062,000	5,372,000	1,576,000
July	44,689,000	13,639,000	43,847,000	8,098,900	837,000
August	28,318,000	11,271,000	20,715,000	14,850,500	1,280,000
September	40,952,000	7,989,000	25,180,000	8,119,300	296,000
October	28,196,000	12,600,000	51,481,200	.....	.....
November	21,770,000	22,790,500	54,125,000	.....	.....
December	20,110,000	26,577,000	18,469,500	.....	.....
	390,096,000	161,820,500	245,304,300	86,616,900 9 mos.	12,221,500 9 mos.

WOOL FLUCTUATIONS.

DOMESTIC AND FOREIGN, DURING 10 YEARS.

1890-1899.



WORLD'S WOOL PRODUCTION IN 1900.
ESTIMATED FROM LATEST RETURNS, BY THE NATIONAL ASSOCIATION
OF WOOL MANUFACTURERS.

Of the world's wool production 1,008,329,613 pounds are of classes one and two, washed and unwashed, and 608,716,000 pounds of class three of the American tariff classification.

	Pounds.	Pounds.
Europe:		
* Great Britain and Ireland	*140,233,398	
Russia, including Poland	261,100,000	
France	103,610,000	
Spain	102,000,000	
Germany	49,590,000	
Austria-Hungary	64,300,000	
Italy	**21,461,000	
Portugal	13,410,000	
Sweden and Norway	8,300,000	
Turkey and Balkan Peninsula	67,500,000	
All other Europe	14,000,000	
		945,995,392
North America:		
United States	***296,626,641	
British Provinces	12,000,000	
Mexico	5,000,000	
		305,626,641
South America:		
Argentine Republic	370,000,000	
Chile	7,500,000	
Brazil	1,600,000	
Uruguay	96,000,000	
Venezuela	15,000,000	
All other	30,000,000	
		510,000,000
Central America and West Indies		5,000,000
Asia:		
Russia	60,000,000	
British India	86,000,000	
Asiatic Turkey	23,000,000	
Central Asia	48,000,000	
China	36,000,000	
All other	15,000,000	
		274,000,000
Australasia		510,000,000
Africa:		
Algeria and Tunis	30,435,000	
Egypt	3,000,000	
Cape Colony, Natal and Orange Free State	100,000,000	
All other	1,000,000	
		134,435,000
Oceania		50,000
Total		2,008,105,013

* Great Britain and Ireland, product of 1900. ** Fleece Washed. *** Washed and unwashed.

The National Association of Wool Manufacturers finds that about one-half of the sheep of the country are now of English breeds or grades in which that blood predominates. Discussing the profitableness of mutton raising, the same authority says that those who have watched the great western markets have seen abundant evidence of higher appreciation of mutton than formerly, in active markets and higher prices. During the present season the average price of mutton in the Chicago market has ranged higher than that of beef, and at times the quotations for prime native wethers have been higher than for extra prime steers.

A noticeable feature of the mutton trade has been the demand for Colorado lambs. It was discovered that the Mexican lambs improved by cross-breeding, and fed a few months in winter with corn and alfalfa made meat of

high quality, which has become so popular that it is sought as a delicacy by managers of hotels of the seaboard cities from Boston and New York to Florida. These lambs sell in Chicago for \$7.50 to \$7.75 per hundred pounds. The business of feeding has been very profitable, and much money has been made in it. Some feeders have had thousands in their yards at a time, and some young men with small means and a little credit with local banks have made handsome profits. Clay, Robinson & Co., of Chicago, estimate the annual output of these lambs fed in Colorado at 350,000, with as many more similar feeding at other points. At \$6 per head, this would make a total of \$4,200,000 for this peculiar development of mutton production. The preferable live weight of these lambs is about 80 pounds, which is not far from the average.

The mutton breeds are very prolific, and the number of lambs with proper care is 100 per cent. of the number of ewes. Always a large proportion of the lamb crop of the farming districts, and not a few in ranch districts, are every season consumed locally as spring lambs, or appear in markets through the year, being usually known as lamb until a year old.

An indication of the rapid increase and large volume of marketing sheep is found in the records of receipts of four principal western markets, at different periods, as follows:

NUMBER OF MUTTON SHEEP RECEIVED AT PRINCIPAL WESTERN MARKETS AT DIFFERENT PERIODS.

	1870.	1880.	1890.	1899.
Chicago	340,863	335,810	2,182,067	3,682,832
Kansas City		60,611	637,969	953,241
Omaha			166,184	1,098,219
St. Louis	40,477	206,949	368,496	432,566

Here is an increase in thirty years from less than 500,000 to more than 6,000,000, and over 5,000,000 were slaughtered in these four cities. Other cities in the west slaughter considerable numbers, the great seaboard cities kill large numbers, besides consuming refrigerated carcasses from the west, and every town and village in the country has a market for live sheep and lambs. On nearly a million farms and ranches where sheep are grown, mutton is a prominent resource for meat consumption.

A similar change in distribution of mutton sheep has been observed in all wool-growing countries. A strong inducement has been found in the demand for mutton in Great Britain, which has given rise to the frozen meat trade of New Zealand and Argentina. Heavy importations of English mutton sheep have been in progress in those countries for years, until nearly half their flocks are cross-bred. Messrs. Helmuth, Schwartze & Co., of London, in reporting the relative proportion of cross-bred and merino wools, show an increase of the former of from 17.7 per cent. in 1888 to 44.6 per cent. in 1898 in the colonial and Plata river wools, as given in the following statement in millions of pounds of clean wool:

RELATIVE INCREASE AND DECREASE OF CROSS-BRED AND MERINO WOOL.

YEAR.	CROSS-BRED.		MERINO.		Total Millions of Pounds.
	Millions of Pounds.	Per Cent.	Millions of Pounds.	Per Cent.	
1885	70	17.7	225	22.2	295
1892	92	19.6	402	30.4	494
1897	222	29.6	354	30.4	576
1898	248	44.6	308	56.4	556

The result of so radical a change throughout the world has caused the relative appreciation of merino wool. There is in all markets a comparative scarcity of fine wool, and a demand for increase to which breeders are now responding.

Under present conditions, however, the production of mutton in this country will continue to be profitable, and should be, in some of its branches, one of the important rural industries.

The value of the net importations of manufactures of wool from 1830 by decades, to 1900, has been as follows:

Ten years ended with—	Aggregate.	Annual average	Av. value per capita
1830	\$82,900,615	\$8,290,062	\$0.75
1840	129,507,716	12,950,772	.94
1850	180,065,518	18,006,552	.65
1860	212,222,720	21,222,272	1.15
1870	230,446,214	23,044,621	.94
1880	285,276,286	28,527,629	.50
1890	432,460,812	43,246,081	.77
1900	520,124,071	52,012,407	.48

SEVENTH ANNUAL REPORT OF BUREAU

QUARTERLY REPORT OF THE BOSTON WOOL MARKET
FOR JULY, AUGUST AND SEPTEMBER, 1900.
DOMESTIC WOOLS.

	1900.			1899.
	July.	August.	September.	September.
OHIO, PENNSYLVANIA AND WEST VIRGINIA.				
(Washed.)				
XX and above	28 @ 30	28 @ 30	28 @ 29	31 @ 32
X	26 @ 28	26 @ 27½	26 @ 26½	29 @ 30
Unmerchantable X and above in grade	21 @ 22	20 @ 22	20 @ 21	22 @ 24
Half blood	27 @ 30	28 @ 32	26 @ 27	30 @ 32
No. 1 Combing and Clothing mixed	30 @ 32	30 @ 31	29 @ 30	32 @ 34
No. 2 Combing and Clothing mixed	30 @ 32	30 @ 31	29 @ 30	32 @ 34
Coarse and common	28 @ 29	27 @ 28	26 @ 28	27 @ 28
Fine Delaine	30 @ 32	30	29 @ 30	32 @ 35
(Unwashed)				
Fine, X and above in grade	19 @ 21	19 @ 20	18 @ 19	22 @ 23
Half blood	22 @ 23	22 @ 23½	21 @ 22	23 @ 24
No. 1 Combing and Clothing mixed	24 @ 25	24 @ 24½	24	24 @ 25
No. 2 Combing and Clothing mixed	24 @ 25	24 @ 24½	24	24 @ 25
Coarse and common	21 @ 22	20 @ 22	20 @ 21	19 @ 21
Fine Delaine	22 @ 23	21 @ 22	20 @ 21	23 @ 25
MICHIGAN, WISCONSIN, NEW YORK, ETC.				
(Washed.)				
X and above	23½ @ 23	23½ @ 23	23½ @ 23	25 @ 26
Unmerchantable X and above in grade	18 @ 20	18 @ 20	18 @ 20	20 @ 22
Half blood	24 @ 25	24 @ 25	24 @ 25	27 @ 28
No. 1 Combing and Clothing mixed	28 @ 30	28 @ 30	28 @ 29	30 @ 32
No. 2 Combing and Clothing mixed	28 @ 30	28 @ 30	28 @ 29	30 @ 32
Coarse and common	26 @ 28	25 @ 28	25 @ 27	27 @ 28
Fine Delaine	26 @ 27½	26 @ 27	26 @ 27	30 @ 31
(Unwashed)				
Fine, X and above in grade	17 @ 18	17 @ 17½	16 @ 17	19 @ 21
Half blood	20 @ 21	20 @ 21	20 @ 21	20 @ 22
No. 1 Combing and Clothing mixed	23 @ 24	23 @ 23	22 @ 23	22 @ 23
No. 2 Combing and Clothing mixed	23 @ 24	23 @ 23	22 @ 23	22 @ 23
Coarse and common	18 @ 20	18 @ 20	18 @ 20	19 @ 20
Fine Delaine	20 @ 21	19 @ 20	18 @ 19	22 @ 23
KENTUCKY AND INDIANA.				
(Unwashed)				
Combing (¾ blood)	25 @ 26	25 @ 25½	25	27½ @ 28
Combing (¼ blood)	25 @ 26	25 @ 25½	25	27 @ 27½
Braid	20 @ 22	20 @ 21	20 @ 21	19 @ 20
Clothing (¾ blood)	24 @ 25	23 @ 25	22	22 @ 24
Clothing (¼ blood)	24 @ 25	23 @ 25	22	22 @ 24
Clothing coarse	20 @ 21	19 @ 20	18 @ 20	19 @ 20
MISSOURI, IOWA AND ILLINOIS.				
(Unwashed.)				
Combing (¾ blood)	23 @ 24	22½ @ 24	22 @ 23	22 @ 23½
Combing (¼ blood)	23 @ 24	22½ @ 24	22 @ 23	22 @ 23½
Braid	19 @ 20	19 @ 20	19	19 @ 21
Clothing (¾ blood)	22½ @ 23	22 @ 23	22 @ 22½	21 @ 22
Clothing (¼ blood)	22½ @ 23	22 @ 23	22 @ 22½	21 @ 22
Clothing coarse	18 @ 20	18 @ 20	18 @ 19	18 @ 20
TEXAS.				
(Scoured basis.)				
Spring, fine, 12 months	50 @ 52	50 @ 52	50 @ 51	48 @ 50
Spring, fine, 6 to 8 months	48 @ 44	48 @ 44	48 @ 44	45 @ 46
Spring, medium, 12 months	46 @ 43	46 @ 43	46 @ 43	45 @ 45
Spring, medium, 6 to 8 months	43 @ 45	42 @ 45	41 @ 44	42 @ 45
Fall, fine	42 @ 43	41 @ 43	41	43 @ 44
Fall, medium	40	40	38 @ 40	40 @ 42
CALIFORNIA.				
(Scoured basis.)				
Spring, Northern, free, 12 months	50 @ 52	50 @ 51	48 @ 50	48 @ 50
Spring, Northern, free, 6 to 8 months	42 @ 44	42 @ 44	42 @ 43	42 @ 43
Southern, 12 months	48 @ 50	47 @ 50	46 @ 48	46 @ 48
Southern, 6 to 8 months	40 @ 42	40 @ 41	40 @ 41	41 @ 42
Fall, free	42 @ 45	42 @ 45	42 @ 44	40 @ 44
Fall, defective	38 @ 40	38 @ 40	37 @ 40	35 @ 40

	1900.			1899.
	July.	August.	September.	September.
OREGON.				
(Scoured basis.)				
Eastern, No. 1.....	48 @ 50	47 @ 50	47 @ 50.	48 @ 50
Eastern, No. 2.....	45 @ 48	44 @ 45	43 @ 45	45 @ 48
Valley, No. 1.....	48 @ 50	48 @ 48	45 @ 48	48 @ 50
Valley, No. 2.....	45 @ 48	44 @ 45	43 @ 45	45 @ 48
MONTANA.				
(Scoured basis.)				
Fine.....	52 @ 53	50 @ 52	48 @ 50	48 @ 52
Fine medium.....	50 @ 52	48 @ 50	47 1/2 @ 48	48 @ 50
Medium.....	46 @ 47	43 @ 45	42 @ 44	45 @ 48
Selected Delaine, staple.....	53 @ 55	52 @ 53	50 @ 52 1/2	52 @ 53
WYOMING AND UTAH.				
(Scoured basis.)				
Fine.....	50 @ 52	50	48 @ 50	48 @ 52
Fine medium.....	50 @ 52	48 @ 50	47 1/2 @ 48	48 @ 50
Medium.....	46 @ 47	45 @ 46	44 @ 45	46 @ 48
Selected Delaine, staple.....	53 @ 55	52 @ 53	50 @ 52 1/2	52 @ 53
COLORADO AND NEW MEXICO.				
(Unwashed.)				
Improved.....	15 @ 18	14 @ 15	14 @ 15	15 @ 20
Coarse and Carpet.....	13 @ 15	12 1/2 @ 15	12 1/2 @ 15	13 @ 18
GEORGIA AND SOUTHERN.				
(Unwashed).....	20 @ 22	20 @ 22	20 @ 22	22 @ 23

FOREIGN WOOLS.

Australian Combing:				
Choice.....	43 @ 48	41 @ 43	40 @ 41	41 @ 43
Good.....	40 @ 41	39 @ 40	38 @ 39	39 @ 40
Average.....	38 @ 40	37 @ 39	36 @ 38	37 @ 39
Australian Clothing:				
Choice.....	42 @ 43	41 @ 42	40 @ 41	39 @ 41
Good.....	40 @ 41	39 @ 40	38 @ 39	39 @ 40
Average.....	37 @ 39	36 @ 38	35 @ 37	36 @ 38
Sydney and Queensland:				
Good Clothing.....	35 @ 37	34 @ 36	33 @ 35	33 @ 34
Good Combing.....	36 @ 38	35 @ 37	34 @ 36	33 @ 35
Australian Crossbred:				
Choice.....	32 @ 33	31 @ 32	31 @ 32	30 @ 32
Average.....	30 @ 32	29 @ 31	29 @ 30	28 @ 30
Australian Lambs:				
Choice.....	43 @ 44	41 @ 43	40 @ 41	41 @ 43
Good.....	36 @ 38	35 @ 37	34 @ 36	33 @ 34
Good Defective.....	26 @ 30	27 @ 29	26 @ 28	26 @ 28
Cape of Good Hope:				
Choice.....	26 @ 28	26 @ 28	26 @ 28	26 @ 28
Average.....	24 @ 26	23 @ 25	23 @ 25	23 @ 25
Montevideo:				
Choice.....	29 @ 31	28 @ 30	27 @ 29	27 @ 29
Average.....	26 @ 28	25 @ 27	25 @ 26	24 @ 26
Crossbred Choice.....	27 @ 29	27 @ 28	27 @ 28	26 @ 28
Australian and Montevideo Pulled:				
Combing.....	44 @ 45	44 @ 45	43 @ 44	45 @ 46
Clothing.....	41 @ 43	41 @ 42	40 @ 42	44 @ 45
English Wools:				
Sussex Fleeces.....	31 @ 32	31 @ 32	31 @ 32	30 @ 32
Shropshire Hogs.....	30 @ 31	30 @ 31	30 @ 31	30 @ 31
Yorkshire Hogs.....	30 @ 31	30 @ 31	30 @ 31	31 @ 32
Irish Selected Fleeces.....	31 @ 32	30 @ 31	30 @ 31	31 @ 32
Carpet Wools:				
Scotch Highland, White.....	14 @ 15	14 @ 15	13 @ 14	14 @ 16
East India, 1st White Joria.....	29 @ 31	29 @ 30	29 @ 30	29 @ 30
East India, White Kandahar.....	29 @ 31	29 @ 30	29 @ 30	29 @ 30
Donskoi, Washed, White.....	16 @ 18	15 @ 16	14 @ 15	15 @ 16
Aleppo, White.....	17 @ 18	17 @ 18	17 @ 18	17 @ 18
Bagdad, White.....	20 @ 21	20 @ 21	20 @ 21	20 @ 21
Bagdad, Black and Brown.....	17 @ 18	17 @ 18	17 @ 18	18 @ 19
China Ball, White.....	15 @ 16	15 @ 16	15 @ 16	15 @ 16
China Ball, No. 1 Open.....	13 @ 14	13 @ 14	13 @ 14	11 @ 13
China Ball, No. 2 Open.....	9 @ 10	9 @ 10	10 @ 11	9 @ 10

Sheep Feeding in Montana.

While nearly four million sheep are to be found in Montana, which is generally conceded to be one of the leading sheep states of the Union, only a small percentage of those exported are fattened within the state. Hitherto wool-production has been the primary object, while the male increase has been sold in an unfinished condition to eastern feeders. It is not long since the larger portion of the finished mutton of the country was produced east of the Mississippi river, but the feeding industry is rapidly extending westward. Colorado and Wyoming have already developed the industry to a great degree. This they have been enabled to do because of the suitability of their conditions for alfalfa production. Until quite recently no attempt has been made to feed in Montana except in so far as it was necessary during stormy periods of the winter while the ranges were covered deep with snow.

But Montana is destined to become a great feeding state also. Ere long she will be able to fatten all the surplus stock produced within her borders. Her many fertile irrigated valleys are all capable of producing some one or more of the legumes, such as red clover, alfalfa and alsike, while native hays can also be secured for the maintenance of the large breeding flocks. The Yellowstone valley has already become famous for its alfalfa production, the Gallatin for its clover, alfalfa and alsike, the Bitter Root and Flathead for red clover, and Milk River for alfalfa. It is in these irrigated regions where the legumes can be grown so abundantly that sheep-feeding is sure to become an important industry. Lambs and wethers have been fattened in the Yellowstone valley on alfalfa with marked success for several years. The work has grown until at the present time about 150,000 sheep and lambs are on feed.

Prof. A. S. Shaw, agriculturist, of the Bozeman Agricultural College, writes that during the three past years the Montana Experiment Station has been endeavoring to stimulate this industry in the Gallatin valley as well. Three years ago one or two hundred were put on feed, followed the next season by double the number, while about 4,000 are on feed at the present time. The conditions which render the Gallatin valley so suitable for purposes of sheep-feeding are found in its ability to produce clover abundantly. In the greater portion of its area clover flourishes best, and fits nicely into the grain-growers' rotation. At the same time in those portions where clover does not succeed so well, on the lighter or more gravelly lands, alfalfa can be produced instead.

The legumes, alfalfa, red clover and alsike, are foods of the most suitable character for mutton-production, containing as they do large quantities of protein compounds, which gives a meat of better quality than that produced from the more carbonaceous foods upon which the eastern feeder is forced to rely.

As regards the feeding value of these three foods, alfalfa, red clover and alsike, there is comparatively little difference. Experiments conducted by the Experiment Station during '98 and '99, in which the three were used, gave results slightly in favor of alsike, with clover and alfalfa a close second and third. Because of the fact that the two latter are larger yielders per acre, this difference in actual value is scarcely appreciable. So that what may be said with regard to any one of these will apply in much the same way to the others.

•Feeding tests during '99 and 1900 showed conclusively that with clover possessing the qualities of our western grown that it alone will produce rapid gains, giving a meat of good quality. That where possible to supply them, a small addition of grain or screening will add to the gains and improve the quality, but if used in large quantity, the cost of production is increased beyond a profitable limit. These tests also proved conclusively that damaged grains could be used along with clover to good advantage in fattening lambs, and where the more expensive marketable grains were used in large quantity their use was not profitable. Therefore that which has been determined with regard to these three foods in the Gallatin valley will apply also to every part of the state in which these can be grown.

During the winter of '99 and 1900 three lots of lambs were used in a feeding test. Lot I. received clover and damaged wheat. Lot II. clover only, and Lot III. clover and oats. Within this period of ninety days, the lambs feeding on clover alone consumed an average of 3.16 pounds per head per day. The two lots receiving .93 pounds of oats and wheat, respectively, per head, each day, consumed only 2.14 pounds of clover per day.

The gains made during the ninety days were as follows: Lot I., fed clover and wheat, thirty pounds each; Lot II., fed clover only, twenty-four and three-tenths pounds; and Lot III., fed clover and oats, thirty-one and three-quarters pounds each. Considering the fact that nearly a pound of grain was fed to each lamb, per day, in two of the lots, the showing made by clover alone is remarkably good. With lambs of the range type feeders seldom reach a gain of ten pounds per head per month when both hay and grain are used.

Cost of feeding:—Clover hay was charged up at \$6 per ton; damaged wheat at 40 cents per cwt., and oats at 90 cents. At this rate the cost of food for each of the three pens, of twenty lambs, for ninety days, was as follows: Lot I., clover and wheat, \$19.38; Lot II., clover only, \$17.21; Lot III., clover and oats, \$27.95. As the total gains per pen, in order above given, were: Lot I., 601 pounds; Lot II., 486 pounds, and Lot III., 635 pounds, the relative cost of production was as follows: The lambs on the clover and wheat ration produced a hundred pounds increase at a cost of \$3.22; clover alone, \$3.54, and clover and oats, \$4.39. These results show conclusively that though clover alone did not give absolutely the most rapid or cheapest increase, still, there was little difference between it and the clover and wheat ration, and that satisfactory gains and financial returns can be obtained from the clover alone. They also show that oats at the price charged, cannot be profitably used for fattening lambs, except in small quantities.

The profits derived from these three methods of feeding, at the end of ninety days, were:

Net profit per head from lambs fed on clover and wheat....	96c.
Net profit per head from lambs fed clover only.....	82c.
Net profit per head from lambs fed clover and oats.....	62c.

The lambs were bought at \$3 each, and sold at the rate of \$4.68 per cwt., live weight.

We conclude from the results of Lot I., that cheap or unsalable grains can be used to good advantage along with clover for fattening lambs, and also that while the clover alone gave good results, we believe that where possible a small amount of grain fed with it will increase the gain, and add to the quality, but large quantities are not necessary with the quality of clover here produced. From the data obtained it was found that eleven and one-eightieths pounds clover was required to maintain the animal and produce a pound of gain. Thus one ton of clover produced 169.5 pounds of mutton, which, at the selling price of \$4.68 per cwt., was worth \$7.93.

The results obtained lead us to conclude that with the conditions which Gallatin valley presents, the possibilities for mutton production are unparalleled. In the first place, the best foods for the purpose can be grown abundantly, and secondly, the stock can be readily procured within the state to consume it. Individual acres of clover, grown at the experiment station, for three successive years produced over one and one-half tons of hay at from one hundred and nineteen days to one hundred and thirty-three days from date of seeding. During the summer of 1900 a field of 7.26 acres of clover on the station farm produced at two cuttings a total of thirty-five tons, 1,451 pounds of well-cured hay. While this food can be produced in such great abundance, it has the advantage of possessing a large percentage of those nitrogenous compounds or flesh formers, which the eastern feeder who relies chiefly on corn or screenings, cannot buy. The clover produces a much better quality of meat than the starchy foods, such as corn, screenings, wheat, barley, etc., which is an important factor.

While the production of clover, alfalfa and alsike are desirable as well as their conversion into mutton, this industry need not interfere in any way with the grain producer of the irrigated valleys. On the contrary, they must materially assist him, as they can take the place of the vast summerfallow areas. These legumes can be secured for winter feeding without decreasing the grain area.

Where clover forms a part of the grain-growers' rotation, and is fed during the winter season lambs can be secured after harvest and made to glean from the stubble with profitable returns.

The Montana farmer in securing his enormous crops of grain loses a product of harvesting and threshing because of the arid conditions which result in so much shattering of grain. In addition to the grain left among the stubble, the meadows or clover fields provide a late growth which may be utilized by sheep. Then there are weeds and grasses found bordering along ditches, fences and roads which can be made use of. In most cases no return is secured from these waste products.

In securing lambs, prior to the time of winter feeding the Experiment Station was enabled to secure data relative to the capability of cattle, sheep and swine to utilize the waste products of the farm, and also the return which could be secured from it. Two hundred and thirty lambs were given access to 112 acres of the Station farm on October 15th, 1900, where they were allowed to forage for one month. This tract of land consisted of 57 acres of clover meadow and the balance of grain stubble. At the same time nineteen yearling steers and heifers, three colts and twenty-five pigs were maintained on the same tract. The lambs were turned on the stubble fields with an average weight of 50.86 pounds, and when removed, one month later weighed 60.64 pounds, making a gain of 9.78 pounds each. Thus the total increase of 2,249 pounds of mutton, at 5 cents per pound, is worth \$112.45. As it was necessary to feed the band 1,100 pounds of hay during storms, the

actual return was reduced to \$109.15, the hay having been charged up at \$6 per ton. The 1,100 pounds of clover fed was used during a snow storm which covered the ground two and one-half days. Sheep being close feeders, are better able to secure the waste products of the farm than cattle. Nor is the sole benefit to be derived from a monetary standpoint, for the farm receives a most thorough cleaning from the sheep, which does the work of the scavenger in handsome fashion. There are few plants that the sheep will not eat if allowed access to them before they become dead and woody. And any weed seeds consumed by them do not escape being destroyed.

Where clover or alfalfa can be grown on our ranches sheep can be used to good advantage in securing the waste products during the autumn season. Coming from the scant ranges, they are thus prepared to go on winter feed in good form. No losses have accrued during the two past seasons from sheep feeding on frozen pastures, even though death from bloating has caused serious loss earlier in the season.

We believe it is possible for the ordinary farmer who uses alfalfa or clover in his rotation to feed at least a carload or two of sheep each winter. There is no other way in which these foods can be disposed of to better advantage than when marketed in the form of mutton. This system will also assist greatly in maintaining the fertility of the forms, not only by leaving the fertilizer on them, but by the benefits which the land receives from the growth of legumes as well.

The Experiment Station is continuing to investigate sheep-feeding problems, and expects to obtain some valuable practical data during the present season. Five bunches of lambs are being fed. Lot I. receives clover and first-class marketable grain, Lot II. clover and screenings, Lot III. clover only, Lot IV. grain, hay, and Lot V. the same as Lot I., but are supplied with water once a day only, while the others have constant access to it. So far as we can determine at present, lots 2 and 3 are making favorable gains as compared with lot 1, and the increase is being produced at a much smaller cost. Where the lambs have constant access to water the gains so far have been over 200 pounds per head per month greater than those on the same feed but watered only once each day. As soon as this test is complete the results will be published in full.

The necessity of securing the proper type of lambs for feeding is a question of much importance. During the last two seasons comparative results have been secured by feeding lambs of the mutton and wool-producing types by similar methods. Those of the mutton type used contained a large percentage of Shropshire blood. They were large-framed and strong-boned, cylindrical of form, possessed of broad, evenly fleshed backs, with good widths at brisket, chest and shoulders. The other class, composed of Merino grades, were almost the reverse as to general form and quality. The compact lamb of the former class carrying a large quantity of natural flesh. When fed on an expensive ration of clover and oats, produced a hundred pounds of increase at a cost of \$4.39, while those of the inferior type, using the same kind of food in exactly the same amount cost \$4.65 per cwt. increase. The lambs of the mutton type required over one-half pound less clover to each pound of increase.

The results already secured justify conclusions to the effect that mutton can be successfully produced on alfalfa, red clover or alsike alone, though the use of a small grain allowance is desirable where possible because of its ultimate effect on quality. Where clover or alfalfa may have been damaged and rendered unsalable it cannot be used in a better way than as food for sheep. There are so many portions of the state suited to the growth of alfalfa, red clover and alsike that their use in mutton production cannot be too strongly urged.

A Profitable Montana Industry.

Experiments Demonstrate That Goat-Raising in Montana Can Be Made an Especially Lucrative Industry.

One industry that has so far been given little attention, but in the several instances where experiments have been made has proved a success, is the raising of goats. The climate of the country is just to the goats' liking, and the mountain ranges and the many branches of smaller hills offer a model pasture, and one that is practically limitless, and will forever remain in the public domain. The goat is easily adaptable to almost any country, thriving in almost any climate from the extremely hot to the extremely cold, but prefers an equable climate and the rugged mountain side for its pasturage and the pinnacle rocks for a lookout, and under these conditions, with the slightest care, it does not fail to prosper. The goat is hardy, agile, enterprising, and only demands a shelter from the rain or snow storms in order to thrive. One of the chief advantages of Montana for the profitable growing of goats is the excellent winter pasturage. The native habitat of the Angora is not better adapted to its keep and development than are the mountains and foothills of the western half of Montana.

At present there are probably less than half a million goats in the United States, and last year the country imported goat skins to the value of \$25,508,249, the price ranging at over 39 cents per pound, and the weight running something over four pounds to the skin.

Treating the subject of goat-raising in this country, the Annual Year Book of the United States Department of Agriculture says that if all goats in this country were kept with the single object of supplying skins for market, they would fail to supply a small fraction of the present demand, and at the same time remain at their present number. At four pounds to the skin, which is not far from the average weight of dry skins, it requires the slaughter of 16,226,621 goats and kids to yield the skins imported during the last fiscal year. This represents live flocks of foreign goats aggregating from twenty-five to thirty millions at least for our present supply of marketable skins alone.

Very few of the goats in the United States are raised for the purpose of marketing their skins. In addition to the large proportion of the common stock kept, as stated, in the suburbs of cities, many are kept in parts of the west with sheep for protection against other animals, as dogs, wolves and coyotes; while the increasing flocks of Angoras are kept principally for their valuable yield of mohair, though some account is now taken of the meat.

It should be noted that something like two-fifths of all the goats in the United States, and a much larger proportion of those kept in flocks, are not the common goats which supply such skins as are imported for leather, but are in part descendants of these, modified by successive infusions of pure Angora blood; and in part, but to a less extent, pure Angoras, kept in California, Texas, Oregon, Idaho, Iowa, Georgia and South Carolina in flocks sometimes numbering thousands, and in other states in smaller numbers. The profitable commercial product of these pure and high-grade animals is the silky fleece.

Goat Products.

In goat-keeping on a large scale it is not alone the skins and fleeces which enter into the account of profit, although these are primary, especially for distant markets. If the skins, which represent over fifteen millions of invoice and twenty-five millions of market value in importations, represented native stock, there would be taken additionally into the home market and possibly profit account nearly the whole animal—the flesh, tallow, bones, hoofs, horns, and perhaps the intestines and their contents, which together may constitute half or more of the entire marketable value. In addition there may be derived from the mature females (always the principal portion of the flock) during much of their lives a considerable value in milk for household uses or for market, or which can be converted into the most salable cheese, such as the Roquefort, Mont D'Or, Le Sassenage, and Levroux of France and Switzerland. So fully is the goat available as a dairy animal, when bred to that object, that it is sententiously described as "the poor man's cow," because of the combination of value with economy of keeping. A female goat is relatively one of the most profitable of domestic animals. Herded goats, under suitable and usually convenient conditions, whether for skin or fleece and by-products, are as surely profitable.

As to the question of suitable and sufficient labor so far as it enters into this subject, the fact that the utilization of unimproved or surplus farm lands is being considered as the food basis of goat-herding will readily suggest that whatever labor may be required must be distributed through the country at least as evenly as the labor required for the accompanying improved lands. Goat-herding is proposed only as another and very simple rural industry where others are already established, and therefore where the labor element is already available. Its cheapness depends upon the usual considerations to a certain extent, though not wholly, for herding requires neither the maturity nor the skill on the part of the attendants that usual farm occupations demand. Ordinarily, goats need less attention than sheep, but where permitted to range an attendant is necessary. It is apparent that this attendant need not be an expensive one.

But in making marketable whatever is derived from the keeping of goats, as the skin, wool or hair, meat, or, during life, the milk and its product, more and varied care is required, calling for average labor compensation. This labor is in no case continuous, however, for the principal products, but seasonal, like the harvests.

As already indicated, the useful objects of goat-keeping are distinctly

three, viz., for the production of skins, so extensively known to the commerce of manufacturing countries; for the production of fleeces of hair or wool, used also in increasing quantity in the manufacture of clothing fabrics, and for the production of milk, mostly for home consumption, and of cheese for home use and market. Often these objects of production are combined to some extent and with varying prominence; for goats best suited economically for skins for leather or for hair or wool products may also be bred as serviceable dairy animals, while those bred particularly for dairy purposes are secondarily valuable, at least, for the final products (skins, meat, etc.), especially where kept in considerable numbers.

These specified objects roughly, but perhaps sufficiently, indicate the classes of domesticated goats prevalent in various countries, and inferentially the conditions attending their prevalence. As the greatest market demand is for skins, the largest herds in various countries are kept to meet that demand, and as the demand relates less to breeding than to abundance, the common goat (that least modified from the native stock) most economically and profitably meets the requirement. Common goats need the least care, and require only the cheapest and most primitive pasturage—bushes and weeds. They furnish a product of world-wide use, not dependent upon any culture for its availability or excellence. Wherever they can be stocked upon unused or otherwise unsalable lands, with the rude and slight care required, they are almost gratuitously profitable. Thus, the price paid for imported goat skins is less representative of cost of production than of the commercial sagacity of the producers and their appreciation of the needs of the market, and suggests an enviable margin of profit.

Thus far goat-keeping has been considered only in relation to the commercial and direct profits promised in the varied or combined branches which yield skins for leather, fleeces and dairy products, though minor sources of gain have been indicated, such as the meat, hair, bones, etc. But there is still another source of incidental but sure profit, which would be sufficient in thousands of cases, even if the others be largely lost sight of and goats be kept simply as goats, and therefore differing in habits from other domesticated animals. The goat, of whatever class, is a reliable and life-long scavenger, and can be depended upon to destroy the many undesirable products of cultivated and fallow lands, the abundant and persistently weedy vegetation which so incessantly besets the cultivated crops. Other domestic animals prefer the cereals and grasses which depend upon the labor and care of the husbandman. What these reject goats prefer, and cheerfully pass by growing grass and grain for a constant dessert of wild carrot, burdock, mullein, or for thistle or cactus. Goats thus voluntarily clean fields of their vegetative refuse before it ripens and scatters its seed; and so persistently and impartially is this done that the latent seeds of valuable grasses, improving the chance thus given them to sprout and thrive, often follow the second or third year of goat pasturage with a uniform carpet, clean as if made to order.

In writing the Bureau on the subject, one of the largest goat-raisers in Texas says: "The Angora goat comes nearer living on nothing than any other animal and remaining rolling fat all year. Where there is no water on

the range they may be watered at home from a well, and where they are kept in a wolf-proof pasture they need not be herded, as they love their home better than any other quadruped. If there is any grass-eater that pays for its food it is the Angora goat, and it lives without eating grass. In the first place its mohair will bring from \$1 to \$2 a year, and the kid that is raised is worth from \$10 to \$25, and when you want extra fine meat you can butcher an Angora mutton weighing from 40 to 100 pounds. This meat tastes more like fat venison than it does like mutton, and is about the most wholesome meat in the world. If you kill the mutton in the fall, when its hair is from 6 to 12 inches long, the hide will bring from \$2 to \$5 undressed. The meat I have generally sold from 5 to 6 cents a pound."

Report of *The* State Register of Lands.

The Income From the State Lands Show a Constant and Very Large Increase.

The report of the State Land Register, Mr. H. D. Moore, covering in brief the work of his department for the last two years, is interesting in that it shows the large income the state is now enjoying from its lands, and the rapid increase made under this administration indicates the revenues of the future that may be anticipated. Mr. Moore says: "During the year 1898 this office issued new five-year leases for 306,617 acres, yielding a revenue, at 6¼ per cent. of appraised valuation, of \$35,544.60.

"For the year ended I issued 570 new five-year leases at the same rate covering 388,711 acres, yielding annual rental in the sum of \$42,767.34, making a total of 1,912 leases and permits now in good standing, which yield an annual revenue of \$144,383.76, and cover one million, two hundred and sixty-five thousand, eight hundred and ninety-five acres. After allowing for renewals, this makes a net increase in rentals of \$35,077.66 over 1899.

The following table shows the amount received from rentals during the past eight years:

1893	\$13,902 54	1896	75,093 06
1894	14,094 00	1897	100,306 20
1895	19,163 50	1900	144,383 76
1896	27,134 77		
1897	47,618 26	Total	\$450,745 90

The present administration has collected in rentals the sum of \$376,371.18 during the past four years, as against \$74,374.81 collected during the preceding four years.

The following table shows the total receipts from the state land grants for the several years from 1892 to 1900:

1892.....	\$44,718 88	1898.....	136,853 71
1893.....	26,427 06	1899.....	300,186 30
1894.....	43,189 61	1900.....	300,275 25
1895.....	44,363 58		
1896.....	42,689 07	..Total.....	\$530,759 64
1897.....	102,936 58		

Total receipts for four years of the present administration being \$630,190.69, as against \$155,750.32 for the preceding four years. The foregoing figures are given to show the growth of the business of this office.

While the total receipts of the office were only slightly in excess of last year, this is accounted for by the decrease in the amount received from sales of land and timber. It is contrary to the general policy of the department to sell the lands, it being held that it is better for the state to derive a revenue of 6¼ per cent. of the appraised valuation of the land from leases than to sell and let the money lie idle. The receipts from these sources were almost \$35,000.00 less than last year; however, this was more than made up by the great increase in rentals from leased lands. There are some large payments from timber permits, amounting to over \$28,000.00, which properly belong to this year's business, but which were not paid in time to be included therein, and will therefore swell next year's receipts.

"I have, under the direction of the Board of Land Commissioners, after properly advertising and offering for sale to the highest bidder, issued permits to cut timber as follows:

Date.	Name.	Fund.	Rate.	Feet— Estimated Amount.
Jan. 1899	John Rankin ..	School.....	\$2.00 per M	350,000
Jan. 1899	Fred Cormier ..	A. C. Bond	2.00 per M	2,445,000
Mar. 1899	Blackfoot Milling Co ..	School.....	4.30 per M	6,000,000
Mar. 1899	Big Blackfoot Milling Co.....	School.....	4.00 per M	5,100,000
Apr. 1899	W. J. Kendall ..	School.....	2.06 per M	4,900,000
Apr. 1899	W. J. Kendall ..	University	2.06 per M	3,950,000
June 1899	Big Blackfoot Milling Co	A. C. Bond	2.00 per M	3,955,000
June 1899	Big Blackfoot Milling Co	Normal School	2.00 per M	25,425,000
June 1899	Big Blackfoot Milling Co	School.....	2.00 per M	3,750,000
June 1899	Big Blackfoot Milling Co	D. & D. Asylum	2.00 per M	1,300,000
June 1899	H. W. McLaughlin ..	A. C. Bond	2.00 per M	4,230,000
Sept. 1899	J. O. Harratty ..	A. C. Bond	2.00 per M	1,671,000
	Total			61,077,000

"About one-half of this timber has been cut and paid for, but as an extension of time upon the higher priced timber has been granted by the Board, and as the log sales materially overrun the estimates, the timber to be cut during the ensuing year will probably yield \$100,000.00, to be divided among the several funds.

"The bulk of the timber sold was surrounded by timber lands sold by the Northern Pacific railway, and being cut over, made the risk from forest fires very great, hence it was deemed best to sell, a good price being obtained.

"In all of my previous reports I have urged that all school and university lands be withdrawn from sale, one reason being that it is more to the interest of the schools to receive an annual income from rents than to sell the lands

and trust to the opportunity arising for the favorable investment of the funds derived from the sales, the practical result being that a large part of the funds lie idle and produce no income whatever. Any lands that can be sold can be leased at a good figure, and if not sold, will constantly increase in value. All of the state land departments that I have communicated with agree with me on the foregoing question, and comment on the impossibility of finding proper investments for their permanent funds. This policy was pursued by the Board of Land Commissioners during the past year, only 842 acres being sold.

"In a former report I recommended that the unsurveyed school sections 16 and 36, within the limits of the several reservations be carefully examined, so that all of the land that is of little or no value may be relinquished to the United States, as provided by law, and valuable grazing lands be selected in lieu thereof while they may be obtained, it being simply a good business proposition to change 700,000 acres of practically worthless land, which the state cannot get possession of during the present generation, for an equal amount of land, worth now from \$2 to \$5 per acre, and which will yield \$87,500.00 in rentals per annum at the present rates. I cannot urge too strongly that this be done as soon as possible, and this revenue secured, and would say in conclusion that unless this be done, we cannot supply the demands made by the stockmen of this state for the selection and leasing of lands.

"This policy has been carried out as rapidly as possible, and the state has relinquished in the

Fort Peck Indian reservation.....	115,840 acres.
Blackfeet Indian reservation.....	88,480 acres.
East half Lewis and Clarke Forest reservation...	86,560 acres.
Bitter Root Forest reservation.....	24,180 acres.

Total 315,060 acres.

"These lands were of no value to the state, and we have secured lands easily worth one million dollars, and which are already paying 4 per cent. income on that amount in rentals (\$40,000.00 per annum) for the benefit of the school fund.

"The effect of the policy pursued by the department will be seen by the amount of school money distributed per capita for the past four years:

Year—	School Census	Amt. Per Capita
1897.....	46,179.....	\$8.28
1898.....	49,478.....	.58
1899.....	53,623.....	1.60
1900.....	57,210estimated.....	2.00

"It will be seen by the above table that in the face of an increase in school population of 11,031 in the past four years, the funds distributed have increased from 38 cents per capita in 1897 to two dollars per capita in 1900, which will be distributed this year, and it is safe to say that, if the present policy is pursued by the incoming administration, the per capita distribution will soon reach \$3.00. It is needless to point out the benefit both the schools and the taxpayers derive from this.

"The state is still entitled to indemnity selections in the several reservations as follows, to-wit:

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Ft. Assiniboine Military Reservation	8,960 acres
Ft. Keogh Military Reservation	3,840 acres
Total	12,800 acres

"I recommend that none of these lands be relinquished, as, when the reservations are thrown open to settlement, the school sections will be valuable, and will not be lost through the intervention of settlement or Indian allotment rights. There is also:

Flathead Indian Reservation	68,520 acres
Ft. Belknap Indian Reservation	32,920 acres
North Cheyenne Indian Reservation	17,280 acres
Crow Indian Reservation	182,400 acres
Flathead Forest Reserve	76,000 acres
Gallatin Forest Reserve	5,700 acres
Balance of Lewis and Clarke Forest Reserve	79,600 acres
Balance of Bitter Root Forest Reserve	14,000 acres
Total	469,100 acres

"I recommend that a careful examination, as far as possible, be made of the lands in the last named reservations to the end that those sections which are found to be on rugged mountains or barren plains, or are worthless to the state, or are settled upon by Indians or halfbreeds, and therefore lost, be relinquished to the general government, and lands selected in lieu thereof. We can thus exchange about 400,000 acres of lands worthless to the common schools of the state for an equal amount of first-class grazing land, which will always increase in value, and which can be immediately leased and yield a revenue of 4 per cent. on a valuation of one and one-quarter million dollars.

SHOWING ACREAGE, ACRES APPRAISED, APPRAISED VALUATION, AND
VALUE OF TIMBER BELONGING TO THE SEVERAL GRANTS.

GRANT.	Acres.	Acres Appraised.	Appraised Value.	Value Timber.	Total Value.
School	2,170,234	1,009,406	\$3,015,155.69	\$353,742	\$3,368,897.66
Public buildings	149,932	149,028	190,195.40	562,370	752,565.40
Agricultural College (B. & I.) ..	134,496	134,496	196,261.23	272,216	468,577.23
School of Mines	96,736	96,726	143,536.32	221,970	370,506.92
Normal School	98,590	98,590	153,444.36	164,250	317,694.36
Reform School	49,817	49,817	73,566.61	82,700	156,266.61
Deaf and Dumb Asylum	50,000	50,000	65,568.32	96,280	161,823.32
University	46,080	46,080	142,000.77	9,200	251,800.77
Total	2,795,574	2,134,223	\$3,965,366.29	\$1,733,708	\$5,722,074.49

SHOWING CLASSIFICATION OF APPRAISED LANDS BELONGING TO THE
SEVERAL GRANTS.

GRANT.	Acres Grazing.	Acres Agricultural.	Acres Timber.
School.....	1,614,507	67,362	48,754
Public Buildings.....	77,091	2,480	68,466
Agricultural College (B. & I.).....	90,422	1,000	43,643
School of Mines	67,717	1,502	27,516
Normal School	68,706	830	29,094
Reform School.....	41,230		8,486
Deaf and Dumb Asylum	30,829		19,571
University	31,217	3,546	1,567
Totals	2,021,968	31,748	265,436

SHOWING AMOUNTS RECEIVED FROM THE VARIOUS LAND GRANTS FOR THE FISCAL YEAR ENDING NOVEMBER 30TH, 1900.

Grant	Sales.	Interest.	Leases.	Timber
School	\$10,711.12	1,944.87	\$112,487.95	\$11,815.41
University	8,573.94	974.08	4,908.50	4,696.89
Public Buildings			3,754.50	
School of Mines			5,980.03	
State Normal School			5,727.22	72,086.58
Agricultural College (Bond)			356.75	10,490.45
Agricultural College (Income)			6,408.75	
State Reform School			2,364.30	
Deaf and Dumb Asylum			2,430.47	90.87
Totals	\$14,555.06	\$2,818.95	\$144,383.76	\$23,487.78

RECAPITULATION.

	1899.	1900.
Land Sales (1st payments)	\$37,086.72	\$5,187.30
Land Sales (Deferred Payments)	18,903.61	9,337.96
Interest on Deferred Payments	2,171.54	2,818.65
Sales of Timber	41,086.23	38,487.78
Rents	109,306.10	144,386.76
Totals	\$30,195.20	\$30,375.35

SHOWING AMOUNTS RECEIVED FROM RENTALS AND FROM SALES OF LANDS AND TIMBER FOR FISCAL YEAR ENDING NOVEMBER 30TH, 1900 AS APPORTIONED TO THE SEVERAL FUNDS.

Fund.	1899.	1900.
Permanent School	\$45,726.94	\$22,036.53
School Income	79,205.80	114,423.52
Permanent University	10,357.05	6,449.18
University Bond	5,341.04	7,088.92
State Capitol Int. and Sinking	4,432.44	3,754.50
School of Mines Building	5,976.73	5,980.03
Normal School Bond	21,600.56	17,812.78
Agricultural College Bond	9,022.96	10,868.20
Agricultural College Income	7,456.87	6,408.75
Reform School Building	2,274.10	2,364.30
Deaf and Dumb Asylum Building	9,230.01	2,811.14
Totals	\$30,195.20	\$30,375.35

SHOWING ACREAGE OF SEVERAL GRANTS LEASED DURING FISCAL YEAR 1900, AND TOTAL ACREAGE UNDER LEASE AT THE CLOSE OF THE FISCAL YEAR 1900.

FUND.	1900.		TOTALS.	
	Acres.	Rents.	Acres.	Rents.
School	370,797	\$40,946.04	395,912	\$112,487.95
University	3,300	385.00	35,875	4,908.50
Capitol Building	4,000	367.50	32,388	3,754.50
School of Mines	1,000	207.50	51,543	5,980.03
Normal School	2,964	314.30	47,371	5,727.22
Agricultural College (Bond)	800	140.00	1,530	356.75
Agricultural College (Income)	1,400	129.00	64,542	6,408.75
Reform School	2,040	192.50	22,393	2,364.30
Deaf and Dumb Asylum	800	85.00	22,928	2,430.47
Totals	281,711	\$42,767.34	1,985,995	\$144,383.76

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SHOWING ACREAGE UNDER LEASE IN THE SEVERAL COUNTIES AT
CLOSE OF FISCAL YEAR 1900.

County	Acreage	County	Acreage
Beaverhead	98,009	Lewis and Clarke	58,318
Broadwater	6,711	Madison	44,668
Carbon	3,960	Meagher	90,330
Cascade	127,173	Missoula	7,965
Choteau	368,963	Park	13,667
Custer	5,798	Ravalli	17,760
Dawson	5,264	Silver Bow	3,443
Deer Lodge	49,363	Sweet Grass	35,330
Fergus	184,772	Teton	85,359
Flathead	12,374	Valley	8,006
Gallatin	38,930	Yellowstone	41,877
Granite	4,640		
Jefferson	6,128	Total	1,365,886

SHOWING TOTAL SALES OF STATE LAND SINCE ADMISSION, AND FROM
WHAT GRANTS.

GRANT.	Acres.	Selling Price.	Average Price Per Acre.
School	14,430.85	\$173,651.45	\$12.04
University	3,721.25	43,788.05	11.50
Capitol Building	681.98	1,459.80	11.01
Reform School	960.00	9,600.00	10.00
Normal School	160.00	1,920.00	12.00
Deaf and Dumb Asylum	660.00	6,760.00	12.07
Agricultural College (Bond)	115.30	1,163.00	10.00
Totals	20,620.38	\$243,337.90	\$11.80

SALES OF TOWN LOTS.

	Lots.	Selling Price.
Missoula School Addition	259	\$30,543.09
Aldridge School Addition	22	371.00
Virginia City School Addition	2	100.00
Total	283	\$31,414.09
Grand Total		\$304,751.99

SHOWING THE SALE OF LANDS AND TIMBER FOR THE YEARS 1899 and 1900
SCHOOL (LAND.)

COUNTY.	1899.		1900.	
	Acres.	Selling Price.	Acres.	Selling Price.
Beaverhead	5.00	\$90.00		
Cascade	46.26	462.60	160	\$1,320.00
Custer	30.59	206.90	230	3,200.00
Choteau	235.06	3,350.80		
Deer Lodge	800.00	8,000.00		
Fergus	40.00	400.00	180	1,800.00
Gallatin	82.00	820.00		
Lewis and Clarke	306.12	3,061.20	120	1,200.00
Madison	16.00	160.00		
Meagher	2.00	20.00		
Missoula	160.00	1,600.00		
Missoula (Lots 34)		1,785.00 (68)		3,345.00
Ravalli	229.00	4,000.00		
Silver Bow	230.00	3,300.00		
Park (Aldridge Lots)		87.50		
Totals	2,442.00	\$27,102.90	760	\$11,365.00

UNIVERSITY (LAND.)

Flathead	808.42	\$8,084.20	32.70	\$327.00
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DEAF AND DUMB ASYLUM (LAND.)

Missoula	500.00	\$5,700.00		
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AGRICULTURAL COLLEGE BOND. (LAND.)

Missoula	116.30	\$1,163.00		
Totals	3,726.75	\$41,110.00	942.60	\$12,092.00

TIMBER SALES

	1899.	1900.
School	\$13,690.60	\$11,315.41
University		4,496.09
State Normal School	15,638.35	12,095.56
Agricultural College (Bond)	7,267.28	10,490.47
Deaf and Dumb Asylum		90.67
Total	\$41,096.23	\$38,487.73
Grand Total of Land and Timber	\$62,776.23	\$60,579.73

Mr. Henry Neill, the State Land Agent, in his report says: "There were selected in the past year by your agent 228,814.39 acres of land; 7,340.88 acres of which is valuable timber land, and the remainder is grazing land, selected on the application of prospective lessees; 208,690 acres has been placed under lease at the rate of \$80.00 per section per annum; 4,000 acres selected in the Judith Basin is fine bench land, and it is the belief of your agent that this land will soon be worth \$10.00 per acre, as most of it can be farmed. It has been my policy during the performance of my official duties to select such lands as in my judgment will prove valuable in the near future, without waiting for some applicant to lease. Nearly all this land selected is placed to the credit of the school fund as indemnity school land, in lieu of sections 16 and 36, which fall within the Fort Peck and Blackfeet Indian reservations, and part of the Bitter Root and Lewis and Clarke Forest reserves. All the lands desired to be relinquished by the board have been fully covered by indemnity selections.

"There are remaining approximately 500,000 acres of school lands tied up in Indian and Forest reserves. If the state will surrender these lands and secure others in lieu thereof, the lands so taken could be leased at the rate of \$80.00 per section per annum, making an annual rental of \$62,500.00. It is fair to assume that some of these reserves will not be thrown open for twenty-five years. If the state in the meantime had her lands to lease, the school fund would be increased over one million dollars. I believe it would be a wise policy for the state to relinquish its school lands in these reserves as soon as possible, thereby adding materially to the school fund.

The State Lands.

Selections and Apportionments of the State Educational and Public Buildings Lands.

The report of the State Land Commissioners says that the two fiscal years of 1899 and 1900 have brought flattering returns to the department. The work of appraising and classifying the state lands is now complete, with the exception of the school lands in the recent surveys. As plats of the new surveys are filed in the state land office immediately after approval by the Surveyor General of Montana, we find that the school lands in the new surveys amount to 219,086 acres, located in the following counties:

Beaverhead	11,598.12 acres	Madison	640.00 acres
Carbon	19,904.85 acres	Meagher	4,450.00 acres
Cascade	1,799.31 acres	Missoula	5,732.90 acres
Choteau	87,179.25 acres	Ravalli	1,280.00 acres
Dawson	20,442.23 acres	Sweet Grass	9,423.90 acres
Deer Lodge	640.00 acres	Valley	30,624.12 acres
Fergus	2,500.00 acres	Yellowstone	640.00 acres
Flathead	19,048.90 acres		
Lewis and Clarke	4,364.30 acres	Total	219,086.20 acres

While practically none of this land is appraised, still there is considerable of it leased under yearly permits which run from year to year, until the land is appraised and properly advertised for sale and lease.

During the year 1899 the state selected 218,058.34 acres and in 1900, there were selected 228,814.39 acres, making a total of 446,872.73 acres. Of this amount 13,943.58 acres are good timber lands located in the western part of the state, and selected mostly for the credit of the Capitol Building grant. The remainder is classified as grazing land, and has been selected on the application of prospective lessees, and placed to the credit of the school fund as indemnity school selections.

To meet the demands made for the leasing of state lands the board deemed it advantageous to the school fund to relinquish the school lands in some of the Indian and Forest reservations, and select in lieu thereof indemnity lands, as provided by act of Congress. Accordingly, the school lands in the following reservations were relinquished and indemnity lands selected in lieu thereof:

Ft. Peck Indian Reservation	115,840.00 acres
Blackfeet Indian Reservation	38,480.00 acres
E. ¼ Lewis and Clarke Forest Reserve.....	86,500.00 acres
Bitter Root Forest Reserve	34,190.00 acres
	215,000.00 acres

In addition to the selection of 315,060 acres in lieu of school lands lost by Indian and Forest reserves the state selected 52,281.45 acres of indemnity

school lands in lieu of school lands lost by reason of their being mineral in character, or claimed by settlers prior to the public survey, making a total of 367,341.45 acres of indemnity school lands selected in the last two years, and practically all placed under lease at the rate of \$80.00 per section per annum.

On December 15, 1898, the board, acting under the supervision of the Secretary of the Interior, relinquished to the United States 8,722.30 acres of undesirable selections made in 1893 in Flathead county, hoping thereby to secure more valuable timber lands in lieu thereof. The lands relinquished were credited to the following grants:

Agricultural College Bond	2,555.31 acres
Reform School	740.75 acres
School of Mines	1,738.40 acres
Normal School	1,709.26 acres
Deaf and Dumb Asylum	1,988.58 acres
	8,722.30 acres

Subsequent to this relinquishment, however, that portion of Flathead county in which these lands are located was embraced in the Flathead Forest reserve by act of congress, together with other lands in this vicinity.

Under the provisions of an act of Congress approved June 4, 1897, the state is granted the privilege of surrendering its lands within the Forest reservation and selecting lieu lands therefor. The state therefore deeded to the United States 24,528.17 acres of approved selections belonging to the following grants, viz.:

School	6,119.17 acres
Agricultural College Bond	4,175.63 acres
Normal School	2,823.00 acres
Public Buildings	3,124.44 acres
Reform School	313.10 acres
School of Mines	2,867.14 acres
	24,528.17 acres

In addition to the above, the state relinquished 2,634.67 acres of unapproved selections in said reserve, and belonging to the following grants, viz.:

Agricultural College Bond	634.67 acres
Normal School	640.00 acres
Reform School	1,040.00 acres
School of Mines	320.00 acres
	2,634.67 acres

Under the provisions of the act of June 4, 1897, the state selected or "scrapped" lands in lieu of state lands falling within the Flathead Forest reserve 4,118.04 acres to the credit of the following grants, viz.:

Agricultural College Bond	2,100.00 acres
Public Buildings	1,958.04 acres
	4,118.04 acres

Of this "scrapped" land, 3,838.04 acres are valuable timber lands, and 280 acres of agricultural lands, the former being located in Missoula county and the latter in Teton county. In this way the state was enabled to select unsurveyed lands, being thus placed on an equal footing with land and timber speculators who are filing upon valuable tracts of land with Forest Reserve scrip in advance of the public surveys.

To establish its preference rights in the selection of land, the state has made application for the survey of the following townships, viz.:

February 1, 1899.—Townships 30, 31 and 32 North; Ranges 7, 8, 9 and 10 East.

March 14, 1899.—Township 29 North; Ranges 24, 25, 27 and 28 West. Township 30 North; Ranges 23, 24 and 25 West. Township 31 North; Range 25 West.

June 6, 1899.—Townships 13 and 14, North; Ranges 24, 25 and 26 West. Township 16 North; Range 23 West.

July 3, 1899.—Township 9 North; Ranges 18 and 19 West. Township 10 North; Range 18 West. Township 11 North; Ranges 18 and 19 West. Township 12 North; Ranges 18 and 19 West. Township 13 North; Ranges 12, 18, 19, 23 West. Township 14 North; Ranges 12, 22, 23 West. Townships 15 North, Ranges 23, 25 West. Township 16 North; Ranges 22, 24, 25, 26 West. Township 17 North; Ranges 23, 24, 25, 26 West. Township 18 North; Range 27 West. Township 20 North; Range 27 West. Township 21 North; Ranges 25, 30 West.

The greater portion of this territory is covered with timber, and it is the desire of the board to secure as much as possible of this character of land for the Capitol Building grant, of which there remains 32,000 acres yet to select.

However, the Northern Pacific Railroad company having made application for a survey of a portion of this land several days prior to that of the state, intending thereby to select indemnity lands upon the even numbered sections under the act of Congress of March 2, 1899. The Commissioner of the General Land Office has decided that the prior application of the Northern Pacific Railroad company has secured it the preference in the matter in the following townships, viz.:

Townships 14 and 16 N. 22 W.; 13, 14, 15, 17 N. R. 23 W.; 1 and 17 N. Ranges 24 and 26 W.; 15, 16, 17, 21 N. R. 25 W.; 18 and 20 N. R. 27 W. and 21 N. R. 30 W.

Complying with the provisions of an act of the Fifth Legislative Assembly, approved March 8; 1897, the board, acting in conjunction with the Trustees of the School of Mines, advertised for bids for \$120,000.00 of School of Mines' bonds to take up the outstanding warrants, thereby stopping to a considerable extent the interest charges on said warrants.

Upon November 27, 1900, at a joint meeting, the bid of the State Treasurer to take the bonds at par, drawing 5 per cent. interest, said bonds to be payable in fifteen years, and maturing at the expiration of thirty years, was accepted, and the bonds ordered sold.

For a full statement of the leasing and sales of state lands, the reader is respectfully referred to the report of the Register of State Lands, and the status of the several grants is fully given in the following tables:

STATUS OF SCHOOL LANDS.

COUNTY.	Acres Surveyed.	Indemnity Selections.	Total.	Acres Appraised.	Appraised Value.
Beaverhead	66,286.12	15,000.00	82,004.21	70,497.00	\$105,222.12
Broadwater	17,675.30	1,338.90	19,514.20	19,514.20	41,524.25
Carbon	37,850.79	.....	37,850.79	36,980.79	58,925.90
Cascade	90,611.21	50,402.00	130,413.27	100,616.20	179,916.12
Choteau	238,238.25	138,690.03	477,128.28	389,949.03	621,644.65
Custer	164,093.42	.....	164,093.42	164,090.62	214,526.90
Dawson	79,114.96	2,559.50	81,674.49	61,222.20	72,594.05
Deer Lodge	43,520.00	27,122.96	60,452.36	68,512.26	137,444.72
Fergus	298,200.00	69,859.46	396,059.46	296,499.46	437,453.92
Flathead	59,584.07	.....	59,584.07	49,526.77	69,832.00
Gallatin	32,952.00	1,290.00	34,222.00	34,222.00	79,490.00
Granite	9,840.00	.....	9,840.00	9,840.00	17,760.00
Jefferson	25,297.28	.....	25,297.28	25,297.28	25,967.08
Lewis and Clarke	43,061.18	11,264.00	54,225.26	49,909.94	98,295.98
Madison	70,402.97	9,596.21	80,091.26	79,461.26	100,270.90
Meagher	51,280.00	2,962.28	54,442.28	60,163.26	146,764.56
Missoula	28,719.17	.....	28,719.17	23,296.78	35,597.06
Park	34,918.95	.....	34,918.95	34,916.95	62,714.75
Ravalli	17,975.56	.....	17,975.56	17,975.56	26,154.20
Silver Bow	2,700.00	1,482.00	4,242.00	4,242.00	9,246.00
Sweet Grass	52,426.42	6,299.46	68,722.88	58,600.00	94,904.44
Teton	119,748.28	28,193.49	142,941.87	142,941.87	214,521.42
Valley	77,829.46	.....	77,829.46	46,096.00	62,282.96
Yellowstone	32,406.55	4,693.49	36,699.95	36,699.95	120,187.70
Totals	1,900,883.36	367,341.45	2,170,224.81	1,901,496.39	\$2,015,155.98

CHARACTER OF APPRAISED SCHOOL LANDS.

COUNTY.	Acres Grazing.	Agricul- tural.	Timber.	M Feet Saw Timber.	Value at \$3.00 Per M.
Beaverhead	65,377.00	5,120.00	.....	.....	.....
Broadwater	16,201.02	3,312.18	.....	.....	.....
Carbon	32,970.79	1,900.00	.....	.....	.....
Cascade	94,681.08	4,595.25	.....	.....	.....
Custer	160,090.02	4,008.40	.....	.....	.....
Choteau	379,462.52	6,376.25	.....	.....	.....
Dawson	69,106.59	1,129.67	.....	.....	.....
Deer Lodge	56,472.26	3,290.00	9,000.00	19,480.00	\$38,960.00
Fergus	296,419.46	1,440.00	640.00	100.00	200.00
Flathead	4,060.23	4,894.15	31,408.79	64,904.00	129,802.00
Gallatin	28,252.00	6,000.00	.....	.....	.....
Granite	7,680.00	1,520.00	640.00	.....	.....
Jefferson	24,757.28	640.00	.....	.....	.....
Lewis and Clarke	47,922.96	1,428.10	.....	.....	.....
Madison	67,270.97	3,220.00	.....	.....	.....
Meagher	77,442.28	2,720.00	.....	.....	.....
Missoula	3,300.00	2,120.00	19,066.00	63,020.00	126,040.00
Park	30,918.95	4,000.00	.....	.....	.....
Ravalli	7,526.56	2,720.00	6,140.00	29,370.00	63,740.00
Silver Bow	3,922.02	320.00	.....	.....	.....
Sweet Grass	56,288.25	2,212.00	.....	.....	.....
Teton	126,778.24	1,729.00	.....	.....	.....
Valley	46,809.99	965.58	.....	.....	.....
Yellowstone	34,719.95	2,170.00	.....	.....	.....
Totals ..	1,614,907.20	67,362.20	67,754.78	176,871.00	\$323,748.00

AGRICULTURAL COLLEGE GRANT.

Total Grant	140,000.00 acres
Amount selected	124,486.06 acres
Amount approved	97,261.64 acres

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STATUS OF AGRICULTURAL COLLEGE GRANT.

COUNTY.	Acres Selected.	Acres Appraised.	Appraised Value.	Rate Per Acres.
Beaverhead	9,636.30	9,636.30	\$12,035.47	\$1.25
Carbon	3,397.93	3,397.93	7,735.36	2.00
Cascade	700.00	700.00	1,320.00	2.00
Choteau	18,120.34	18,120.34	35,340.68	2.00
Deer Lodge	2,000.00	2,000.00	2,000.00	1.18
Flathead	27,185.21	27,185.21	27,729.81	1.02
Gallatin	3,093.71	3,093.71	6,222.38	2.12
Jefferson	4,645.84	4,645.84	5,482.09	1.18
Lewis and Clarke	10,062.74	10,062.74	21,332.10	1.98
Madison	15,918.68	15,918.68	17,610.30	1.10
Meagher	12,401.31	12,401.31	24,803.62	2.00
Missoula	14,457.26	14,457.26	14,457.26	1.00
Ravalli	5,700.00	5,700.00	6,520.00	1.12
Sweet Grass	1,230.00	1,230.00	2,500.00	2.00
Teton	4,186.83	4,186.83	8,373.66	2.00
Totals	134,496.05	134,496.05	195,361.22	1.46

CHARACTER OF AGRICULTURAL COLLEGE LANDS.

COUNTY.	Grassg.	Agricult'ri	Timber.	Amount Saw Timber.	Value at \$2.00 Per M.
Beaverhead	9,636.30	.....	.....	.....	.....
Carbon	3,397.93	.....	.....	.....	.....
Cascade	700.00	.....	.....	.....	.....
Choteau	18,120.34	.....	.....	.....	.....
Deer Lodge	600.00	.....	2,580.00	6,140.00	\$12,280.00
Flathead .....	.....	629.64	26,495.67	74,698.00	149,396.00
Gallatin	2,773.71	320.00	.....	.....	.....
Jefferson	4,645.84	.....	.....	.....	.....
Lewis and Clarke	10,062.74	.....	.....	.....	.....
Madison	15,918.68	.....	.....	.....	.....
Meagher	12,401.31	.....	.....	.....	.....
Missoula	480.00	.....	12,977.26	55,370.00	110,740.00
Ravalli	5,700.00	.....	.....	.....	.....
Sweet Grass	1,230.00	.....	.....	.....	.....
Teton	4,186.83	.....	.....	.....	.....
Totals	90,422.68	1,009.64	43,042.84	136,106.00	\$272,216.00

STATUS OF THE SCHOOL OF MINES GRANT.

Total grant .. 100,000.00 acres
 Amount selected .. 56,735.05 acres
 Amount approved .. 73,971.45 acres

COUNTY.	Acres selected.	Acres appraised.	Appraised value.	Rate per acre.
Beaverhead	10,564.23	10,562.22	10,726.12	\$1.05
Cascade	10,978.67	10,978.67	21,957.34	2.00
Choteau	24,089.52	24,089.52	48,079.12	2.00
Deer Lodge	1,609.15	1,609.15	2,363.72	1.50
Flathead	25,108.92	25,108.92	27,619.82	1.10
Gallatin	3,124.05	3,124.05	17,622.28	1.92
Lewis and Clarke	4,163.53	4,163.53	7,296.17	1.75
Madison	6,106.05	6,106.05	6,520.99	1.14
Meagher	90.00	90.00	160.00	2.00
Ravalli	3,230.00	3,230.00	3,340.00	1.01
Teton	2,720.26	*2,720.26	2,640.22	1.34
Totals	96,735.05	96,735.05	148,536.92	\$1.34

CHARACTER OF SCHOOL OF MINES LANDS.

COUNTY.	Grazing.	Agricul- tural.	Timber.	M feet timber	Value at \$a.00 per M.
Beaverhead	10,564.82	.....	.....	.....	.....
Cascade	10,978.67	.....	.....	.....	.....
Choteau	24,009.58	.....	.....	.....	.....
Deer Lodge	820.00	.....	530.15	400.00	300.00
Flathead .....	.....	1,461.80	23,947.13	97,685.00	136,370.00
Gallatin	9,144.03	40.00	.....	.....	.....
Lewis and Clarke	4,182.53	.....	.....	.....	.....
Madison	5,106.08	.....	.....	.....	.....
Meagher	80.00	.....	.....	.....	.....
Ravalli .....	.....	.....	3,280.00	12,900.00	26,080.00
Teton	2,720.26	.....	.....	.....	.....
Totals	67,718.97	1,501.80	27,535.28	110,985.00	221,970.00

STATUS OF THE NORMAL SCHOOL GRANT.

Total grant 100,000.00 acres
 Amount selected 98,580.02 acres
 Amount approved 98,647.34 acres

COUNTY.	Acres Selected.	Acres Appraised	Value.	Rate Per Acre.
Beaverhead	18,713.57	18,713.57	\$39,427.14	\$2.00
Cascade	2,341.11	2,341.11	5,094.43	1.87
Choteau	15,671.35	15,671.35	81,342.50	2.00
Flathead	23,570.35	23,570.35	23,570.35	1.00
Gallatin	7,081.90	7,081.90	15,380.18	2.00
Lewis and Clarke	2,323.14	2,323.14	4,624.28	2.00
Madison	15,009.37	15,009.37	18,381.74	1.04
Meagher	1,120.00	1,120.00	2,240.00	2.00
Missoula	6,664.14	6,664.14	6,664.14	1.00
Ravalli	1,951.82	1,951.82	2,440.76	1.25
Teton	2,784.47	2,784.47	7,666.94	2.00
Totals	98,580.02	98,580.02	253,444.26	\$1.85

CHARACTER OF NORMAL SCHOOL LANDS.

COUNTY.	Grazing.	Agricul- tural.	Timber.	M Feet Timber.	Value at \$a.00 Per M.
Beaverhead	18,713.57	.....	.....	.....	.....
Cascade	2,341.11	.....	.....	.....	.....
Choteau	15,671.35	.....	.....	.....	.....
Flathead .....	.....	100.95	23,480.37	52,770.00	\$105,540.00
Gallatin	6,311.90	720.00	.....	.....	.....
Lewis and Clarke	2,323.14	.....	.....	.....	.....
Madison	15,009.37	.....	.....	.....	.....
Meagher	1,120.00	.....	.....	.....	.....
Missoula .....	.....	.....	6,664.14	20,385.00	56,710.00
Ravalli	1,951.82	.....	.....	.....	.....
Teton	2,784.47	.....	.....	.....	.....
Totals	62,764.22	820.95	29,024.51	82,125.00	\$164,350.00

STATUS OF THE REFORM SCHOOL GRANT.

Total grant 50,000.00 acres
 Amount selected 49,517.37 acres
 Amount approved 44,356.75 acres

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COUNTY.	Acres selected.	Appraised value.	Rate per acre.
Beaverhead	5,900.00	\$5,120.00	\$1.00
Carbon	3,849.93	7,090.90	2.00
Cascade	2,433.42	4,900.84	2.00
Choteau	2,496.19	4,990.38	2.00
Deer Lodge	6,176.67	9,300.00	1.50
Fergus	1,276.61	1,604.61	1.25
Flathead	4,438.91	4,672.70	1.05
Gallatin	642.32	642.32	1.00
Jefferson	2,853.37	2,853.37	1.00
Lewis and Clarke	1,100.00	2,200.00	2.00
Madison	5,810.35	7,262.95	1.25
Meagher	10,722.60	21,445.20	2.00
Totals	49,817.37	73,568.61	\$1.45

CHARACTER OF REFORM SCHOOL LANDS.

COUNTY.	Grazing.	Agricultural.	Timber.	M feet timber.	Value at \$a.co per M
Beaverhead	5,900.00	.....	.....	.....	.....
Carbon	3,849.93	.....	.....	.....	.....
Cascade	2,433.42	.....	.....	.....	.....
Choteau	2,496.19	.....	.....	.....	.....
Deer Lodge	4,029.67	.....	4,046.00	16,900.00	\$33,800.00
Fergus	1,276.61	.....	.....	.....	.....
Flathead .....	.....	.....	4,438.91	9,450.00	18,900.00
Gallatin	642.32	.....	.....	.....	.....
Jefferson	2,853.37	.....	.....	.....	.....
Lewis and Clarke	1,100.00	.....	.....	.....	.....
Madison	5,810.35	.....	.....	.....	.....
Meagher	10,722.60	.....	.....	.....	.....
Totals	41,230.26	.....	8,484.91	26,350.00	\$52,700.00

STATUS OF THE CAPITOL BUILDING GRANT.

Total grant	192,000.00 acres
Amount selected	149,922.64 acres
Amount approved	118,357.01 acres

COUNTY.	Acres Selected.	Acres Appraised.	Appraised Value.	Rate Per Acre.
Beaverhead	6,761.00	6,761.00	\$5,451.00	\$1.25
Broadwater	15,589.02	15,589.02	25,721.93	1.65
Cascade	500.00	500.00	700.00	1.50
Choteau	6,077.42	6,077.42	12,154.84	2.00
Dawson	640.00	640.00	1,280.00	2.00
Deer Lodge	12,909.08	12,909.08	12,909.08	1.00
Flathead	35,222.07	34,222.43	37,621.27	1.10
Gallatin	14,029.40	14,029.40	25,587.20	1.70
Lewis and Clarke	6,964.90	6,964.90	12,135.66	1.75
Madison	19,845.00	19,845.00	22,931.70	1.15
Meagher	640.00	640.00	1,280.00	2.00
Missoula	19,558.19	19,558.19	19,558.19	1.00
Ravalli	6,718.47	6,718.47	6,921.32	1.03
Teton	2,720.00	2,720.00	5,440.00	2.00
Totals	149,922.64	149,028.00	193,135.40	\$1.30

CHARACTER OF CAPITOL BUILDINGS LANDS.

COUNTY.	Grazing.	Agricultural.	Timber.	M feet saw timber.	Value at \$2.00.
Beaverhead	6,781.00				
Broadwater	15,529.02				
Cascade	400.00	100.00			
Choteau	6,077.43				
Dawson	580.00	80.00			
Deer Lodge	2,529.08	480.00	10,840.00	40,526.00	\$51,750.00
Flathead		100.00	34,068.43	126,260.00	\$53,500.00
Gallatin	14,466.40	100.00			
Lewis and Clarke	6,604.90	800.00			
Madison	19,385.00	100.00			
Meagher	640.00				
Missoula			19,554.19	101,750.00	\$50,800.00
Ravalli	2,719.47		4,000.00	12,880.00	\$5,000.00
Teton	2,000.00	720.00			
Totals	77,691.38	2,480.00	68,458.42	261,686.00	\$563,370.00

STATUS OF THE UNIVERSITY GRANT.

Total grant 46,080.78 acres
All selected and patented to the State.

COUNTY.	Acres.	Appraised value.	Rate per acre.
Broadwater	640.00	1,800.00	\$2.80
Cascade	1,486.94	8,541.35	4.43
Custer	4,453.74	6,700.78	1.50
Deer Lodge	318.97	1,560.06	5.00
Fergus	12,781.73	20,800.00	1.61
Flathead	9,879.19	95,505.40	9.68
Gallatin	2,997.90	8,316.73	2.80
Granite	635.84	1,500.00	2.50
Jefferson	1,231.92	2,681.80	2.00
Lewis and Clarke	1,920.00	2,800.00	1.50
Madison	800.00	1,300.00	1.70
Meagher	4,147.03	2,205.38	2.00
Missoula	1,380.00	2,500.00	2.00
Park	957.45	2,040.00	2.17
Yellowstone	1,655.00	2,985.00	1.87
Totals	46,080.78	\$142,600.77	\$3.00

CHARACTER OF UNIVERSITY LANDS.

COUNTY.	Grazing.	Agricultural.	Timber.	M feet timber.	Value at \$2.00 per M
Broadwater	640.00				
Cascade	565.94	820.00			
Custer	3,949.05	604.63			
Deer Lodge	153.97	100.00			
Fergus	12,091.73	840.00			
Flathead	320.00	8,351.94	1,307.18	4,000.00	\$9,200.00
Gallatin	2,295.30	651.00			
Granite	365.84	340.00			
Jefferson	1,231.92				
Lewis and Clarke	1,920.00				
Madison	320.00	480.00			
Meagher	3,997.08	100.00			
Missoula			1,380.00	2,760.00	7,500.00
Park	477.45	480.00			
Yellowstone	1,655.00				
Totals	31,217.32	12,396.63	1,587.18	8,760.00	\$18,700.00

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TABLE SHOWING THE AMOUNT OF SELECTED LANDS IN EACH COUNTY.

COUNTY.	Granted Lands.	Indemnity School Lands.	Totals.
Beaverhead	68,318.78	15,996.09	74,009.87
Broadwater	94,239.09	1,839.90	12,047.92
Carbon	7,747.86		7,747.86
Cascade	19,369.14	60,408.00	69,765.20
Choteau	66,408.78	123,890.03	206,298.81
Custer	4,453.74		4,453.74
Dawson	140.00		8,199.60
Deer Lodge	26,631.69	27,133.30	53,765.95
Fergus	15,007.33	69,869.46	84,866.79
Flathead	129,716.96		129,716.96
Gallatin	29,404.70	1,280.00	40,694.70
Granite	696.84		636.84
Jefferson	11,593.61		11,593.61
Lewis and Clarke	28,303.61	11,364.00	39,667.60
Madison	66,908.74	9,696.31	76,605.05
Meagher	63,076.68	3,963.38	45,437.96
Missoula	46,639.99		46,639.99
Park	867.45		867.45
Ravalli	17,710.29		17,710.29
Silver Bow		1,433.03	1,433.03
Sweet Grass	1,280.00	6,298.46	7,578.46
Teton	13,131.66	23,195.49	34,325.05
Valley			
Yellowstone	1,665.69	4,463.40	6,149.09
Totals	696,508.09	267,941.45	968,943.54
Amount of surveyed school lands		acres	1,800,893.36
Total amount of state lands		acres	2,794,736.90

STATUS OF THE DEAF AND DUMB ASYLUM GRANT.

Total grant	50,000.00 acres
Amount selected	51,047.45 acres
Amount approved	44,777.43 acres

COUNTY.	Acres Selected.	Acres Appraised.	Appraised Value.	Rate Per Acre.
Beaverhead	6,840.00	6,840.00	\$6,840.00	\$1.00
Deer Lodge	1,630.00	1,630.00	2,360.00	1.54
Flathead	14,310.49	14,310.49	14,729.99	1.03
Gallatin	2,677.44	2,677.44	2,634.33	1.30
Lewis and Clarke	1,640.00	1,640.00	2,600.00	1.76
Madison	3,653.36	3,653.36	2,690.00	1.03
Meagher	12,964.40	12,964.40	25,928.80	3.00
Missoula	4,940.40	4,940.40	4,940.40	1.00
Totals	51,047.45	50,074.09	65,563.23	1.13

CHARACTER OF DEAF AND DUMB ASYLUM LANDS.

COUNTY.	Grazing.	Agricul- tural.	Timber.	Amount Saw Timber.	Value at \$3.00 Per M.
Beaverhead	6,840.00				
Deer Lodge	540.00		900.00	1,040.00	\$2,000.00
Flathead			14,310.49	31,365.00	63,610.00
Gallatin	2,677.44				
Jefferson	2,801.38				
Lewis and Clarke	1,640.00				
Madison	3,653.36				
Meagher	12,964.40				
Missoula			4,940.40	25,336.00	31,670.00
Totals	30,916.58		20,130.89	48,136.00	\$96,280.00

The United States Land Offices of Montana.

The apportionment for the district of Montana out of the current appropriation made for surveying public lands for the fiscal year ending June 30th, 1900, was \$43,000. Under this apportionment eleven surveying contracts which practically absorbed the amount were let. During this fiscal year the Northern Pacific Railway company deposited for surveys \$12,220, but the surveys to be made under the deposit were delayed on account of a failure to comply with the regulations of the Interior department in the letting of the contracts. The same company made a further survey deposit of \$7,286.50.

The Surveyor General's annual report shows that during the year 4,554 miles of line were surveyed, as follows: Standard parallels, 68 miles; guide meridians, 75 miles; township lines, 651 lines; lines re-established, 80 miles; re-surveys, 63 miles; re-tracements, 68 miles; sub-divisions, 3,409 miles; meander lines, 142 miles.

The Surveyor General's report shows that after his report for the year ending June 30, 1899, was filed, and consequently not appearing therein, returns of 1,206 miles of surveys were made by deputy surveyors. During the year 10 exterior plats were made; 224 township plats were made; 108 books of field notes were examined. There was deposited during the year the sum of \$9,975 for office work on mineral surveys; 330 orders were issued for mineral surveys; 8 orders were issued for amended mineral surveys; 14 supplemental orders were issued for mineral surveys; 4 orders were issued for reports on placers; 304 surveys were examined and approved; 8 amended surveys were examined and approved; 4 reports on placers were examined and approved; 736 mineral plats were made; 225 transcripts were made of surveys and reports on placers; 298 surveys were platted on connected sheets, 10 surveys were re-platted on connected sheets; 28 new connected sheets were made; 2 connected sheets were re-platted; 20 United States deputy mineral surveyors were commissioned.

The Surveyor General estimates that \$50,000 will be required for surveys in Montana for the fiscal year ending June 30, 1902.

In support of his estimate he submits the following statement with reference to the demand for surveys within the state:

Conditions have not changed since my last report. The demand for surveys has not abated. Advices from all over the state indicate that there is a demand for homes by persons who are desirous of engaging in agricultural and pastoral pursuits. They prefer to settle on surveyed lands, when possible; but by reason of the fact that practically all such desirable land is appropriated, are compelled to settle upon unsurveyed lands, and then apply for the survey of the same, or, as many prospective settlers do, pass

through Montana and settle in other states having a larger proportion of surveyed land than this state has.

The survey between Montana and Idaho has been made and finally accepted, and the plats and notes are now on file in the office of the Surveyor General of the state.

Fort Ellis and Fort Maginnis have been abandoned, leaving the following military reservations existing within the state:

Camp Baker, in T. 11 N., R. 4 E.....	2,400.00
Fort Keogh, at mouth of Tongue River.....	57,619.00
Fort Assiniboine, mostly between the Milk and Missouri rivers, and within the reservation for the Gros Ventre, Pagan and other Indians..	168,640.00
Fort Missoula:	
Original reserve: Sec. 31, T. 13 N., R. 19 W.....	940.00
Additional reserve: S. $\frac{1}{2}$ NE. $\frac{1}{4}$ and SE $\frac{1}{4}$ sec. 25, T. 13 N., R. 20 W., the S. $\frac{1}{2}$ NE. $\frac{1}{4}$, S. $\frac{1}{2}$ NW. $\frac{1}{4}$, SE. $\frac{1}{4}$ NE. $\frac{1}{4}$ of SW. $\frac{1}{4}$, and NW. $\frac{1}{4}$ of SW. $\frac{1}{4}$, sec. 30, T. 13 N., R. 19 W..	590.23
Timber reserve on unsurveyed land.....	1,577.41
Fort Custer post reservation, 6 miles square, in T _s . 1 and 2 S., R _s . 33 and 34 E.	23,040.00
National cemetery of Custer's battlefield.....	640.00
Limestone reservation, near old Fort C. F. Smith	2,227.30
Total in Montana as far as known or estimated	367,343.84

The following approvals and certifications of lands, in aid of education, have been made in Montana: State charitable, penal and reformatory institutions, 1,275.61 acres; school of mines, 21,685.19 acres; deaf and dumb asylum, 1,175.81 acres; agricultural college, 37,867.60 acres; state normal school, 19,970.70 acres.

The following table gives the public and Indian lands of the state disposed of for cash and under the homestead acts, the timber culture acts, located with agricultural college and other kinds of scrip and military bounty warrants and selected by states and railroads, and the amounts of cash received on account of sales of public lands, by years, from 1888 to 1900, the fiscal years ending on the 30th of June:

Year.	Acres.	Year.	Cash Received.	Year.	Acres.	Year.	Cash Received.
1888	232,597.04	1898	\$166,304.12	1895	418,302.54	1895	\$124,736.15
1889	463,428.67	1899	369,636.07	1896	681,617.40	1896	150,006.74
1890	481,916.70	1900	309,735.43	1897	941,329.58	1897	197,206.89
1891	522,990.36	1891	230,590.77	1898	600,798.33	1898	167,483.71
1892	537,263.21	1892	253,367.22	1899	889,894.60	1899	195,638.23
1893	631,968.53	1893	267,344.91	1900	1,158,394.47	1900	359,506.36
1894	326,629.86	1894	127,690.35	Total.....	7,466,719.70		2,714,145.54

This shows the appropriations made during the last fiscal year to be very nearly double those made in the state rating next to Montana, and the cash income, which is exclusive of the land office fees, shows nearly the same proportionate contract. The amounts accrued and paid to Montana on account of the grants of 2, 3 and 5 per cent. of the net proceeds of the sales of public lands, amounted in 1899 to \$9,006.62, and the total income of this nature up to and including the close of this fiscal year has been \$83,508.34.

The following table gives the unappropriated areas in the several land districts and counties of the state, together with their general classification:

Land District.	County.	Area unappropriated and unreserved.			Area reserved.	Area appropriated.	Total area of land surface of the county in land district.	Brief description of character of unappropriated and unreserved land.
		Surveyed.	Unsurveyed.	Total.				
Bozeman	Broadwater	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Principally arid.
	Carbon	28,719	32,000	70,719	.....	66,281	126,000	One-third good farming land, two-thirds mountainous.
	Crow Reservation	383,630	991,196	1,374,726	.....	1,094,447	1,997,000	No vacant public land.
	Gallatin	49,095	503,639	552,734	.....	1,094,447	1,997,000	One-fourth good farm land, three-fourths mountainous.
	Jefferson	47,816	38,000	85,816	.....	71,194	167,000	Principally arid.
	Madison	362,534	644,040	1,006,574	.....	285,416	1,392,000	One-fourth arid, three-fourths mountainous.
	Park	188,931	1,113,601	1,302,532	.....	428,598	1,731,000	One-third good farm land, two-thirds arid and mountainous.
	Sweet Grass	323,626	820,877	1,144,503	.....	418,387	1,562,890	Grazing and mountainous.
	Yellowstone	196,946	183,664	380,610	.....	766,978	1,137,000	Arid and mountainous.
	Total	1,827,259	4,360,276	6,187,535	312,000	3,170,605	9,368,400	
Helena	Beaverhead	321,107	1,008,800	1,329,907	2,800	316,483	2,142,000	Mountainous and grazing.
	Broadwater	170,466	309,300	479,766	.....	160,118	640,000	Mountainous and agricultural.
	Cascade	724,556	435,722	1,160,278	47,630	947,800	2,146,000	Grazing and Agricultural.
	Choteau	6,127,590	2,914,959	9,042,549	780,360	887,231	9,720,600	Grazing and Agricultural.
	Deer Lodge	130,165	680,134	810,300	.....	776,711	1,482,000	Mountainous, some agricultural.
	Fergus	10,932	14,089	25,021	.....	.....	35,000	Grazing.
	Flathead	9,400	238,000	247,400	.....	.....	285,000	Valleys, mountainous, timber, grazing.
	Gallatin	113,617	46,840	160,457	.....	5,700	62,000	Mountainous.
	Jefferson	75,580	245,000	320,580	.....	43,387	628,000	Mountainous.
	Lewis and Clarke	651,744	654,839	1,306,583	.....	154,840	897,600	Mountainous, grazing, agricultural.
Kalispell	Madison	297,620	1,233,704	1,531,324	.....	558,053	2,726,500	Mountainous, grazing, agricultural.
	Meagher	250,504	815,881	1,066,385	20,600	286,370	1,392,000	Mountainous, grazing, agricultural.
	Park	2,300	61,200	63,500	.....	9,300	62,000	Mountainous, grazing, agricultural.
	Silver Bow	170,619	300,040	470,659	.....	107,341	647,000	Mountainous, grazing, agricultural.
	Sweet Grass	4,480	31,600	36,080	.....	10,000	46,000	Mountainous, grazing, agricultural.
	Teton	1,306,737	1,180,187	2,486,924	1,467,000	400,586	4,987,500	Mountainous, grazing, agricultural.
	Total	9,686,348	11,773,537	21,459,885	2,890,000	6,317,055	28,556,930	
	Flathead	628,346	2,701,126	3,329,472	286,000	105,518	3,665,000	Valleys, mountainous, timber, grazing.
	Missoula	.....	91,000	91,000	.....	.....	91,000	Timbered valleys and mountains.

Land Districts.	County.	Area unappropriated and unreserved.		Area reserved.	Area appropriated.	Total area of land surface of the county in land district.	Brief description of character of unappropriated and unreserved land.
		Surveyed.	Unsurveyed.				
Lewistown	Teton .....	.....	4,462,636	4,894,982	465,000	9,357,618	6,390,500 Subject to location and entry under the mineral laws only.
	Total	532,346	4,462,636	4,894,982	465,000	9,357,618	6,390,500
	Choteau	9,576	173,739	183,315	.....	3,685	187,000 Broken grazing.
	Custer	34,963	303,334	338,297	1,250	13,871	232,500 Broken grazing.
	Dawson	334,109	416,893	651,002	15,360	48,138	714,500 Broken grazing.
	Fergus	2,400,859	3,106,535	4,697,684	143,011	1,682,365	5,713,000 Grazing, farming, timber and mountain-ous.
	Meagher	288,692	68,743	357,435	39,187	210,479	603,000 Farming and grazing.
	Sweet Grass	114,311	95,663	170,763	15,360	148,877	235,000 Farming and grazing.
	Yellowstone	200,641	144,797	345,438	24,350	190,543	500,000 Grazing.
	Total	3,382,963	3,176,923	6,459,886	238,518	1,678,697	8,371,000
Miles City	Carbon .....	.....	70,000	70,000	.....	.....	70,000 Mountainous.
	Choteau	113,940	304,660	418,600	.....	7,800	485,500 Agricultural and grazing.
	Crow Reservation .....	.....	.....	.....	.....	.....	2,045,000 No vacant public land.
	Custer	1,671,821	8,693,000	10,364,821	546,400	1,281,689	12,093,000 Grazing and Agricultural.
	Dawson	293,811	6,773,700	7,067,511	155,200	495,940	7,708,500 Grazing and Agricultural.
	Valley	1,322,133	4,704,750	6,026,883	2,351,920	93,192	8,460,000 Grazing and Agricultural.
	Yellowstone	141,430	654,500	697,930	.....	53,080	654,000 Grazing and Agricultural.
	Total	3,543,100	20,380,590	24,423,750	6,129,530	1,392,790	22,446,000
	Beaverhead	5,653	603,267	608,919	.....	146,031	755,000 Arid and grazing.
	Deer Lodge	21,698	19,300	41,000	.....	56,494	67,000 Mountains, timber, grazing and mineral.
Missoula	Flathead .....	.....	16,000	16,000	.....	.....	16,000 Small valleys, mountains, timber, grazing.
	Granite	14,764	469,928	484,713	.....	19,289	604,000 Mountains, timber, minerals.
	Missoula	87,728	2,339,023	2,056,761	1,333,333	532,919	4,943,000 Small valleys, mountains, timber and grazing.
	Ravalli	32,230	716,908	749,138	601,200	253,168	1,755,000 Small valleys, mountains, timber and grazing.
	Silver Bow .....	.....	9,600	9,600	.....	.....	9,600 Mountainous.
	Total	162,660	4,773,940	4,936,600	2,024,533	1,127,947	3,085,500
	Total in Montana	13,546,146	49,618,811	67,943,667	11,511,531	14,119,013	63,558,500

BUSINESS TRANSACTED AT THE LOCAL LAND OFFICES.

(Note.—The area in parenthesis is not included in the aggregate, being accounted for in the original entries.)

BOZEMAN.

Class of Entry.	No.	Acres.	Commissions.	Fees.	Amount.
Sales of land at public auction	1	40.00	.....	.....	\$100.00
Sales of timber and stone lands	1	40.00	.....	.....	\$100.00
Sales of mineral lands	21	1,554.28	.....	.....	5,255.00
Sales of coal lands	19	2,761.68	.....	.....	55,223.00
Sales of Crow Indian lands	8	(1,975.94)	.....	.....	1,913.46
Excess payments on homestead, timber-culture, and other entries and locations.	41	214.95	.....	.....	557.22
Original entries under the desert-land act	118	15,651.21	.....	.....	2,920.27
Final entries under the desert-land act..	49	(7,266.67)	.....	.....	7,216.67
Sales under act March " 1887	1	30.00	.....	.....	300.00
Homestead entries commuted to cash under section 2301, R. S.	1	(340.54)	.....	.....	601.35
Total cash sales	356	30,372.23	.....	.....	75,077.77
Original homestead entries	418	61,216.01	\$4,486.87	\$2,975.00	\$3,470.87
Final homestead entries	116	(16,904.79)	1,352.61	.....	1,952.61
Final entries under the timber-culture laws	5	(785.57)	.....	30.00	30.00
Lands selected under grants to railroads	20	3,117.47	.....	40.00	40.00
State selections	58	8,964.21	.....	115.00	115.00
Applications to purchase					
Mineral lands	29	.....	.....	200.00	200.00
Coal lands	47	.....	.....	141.00	141.00
Timber and stone lands	1	.....	.....	10.00	10.00
Mineral protests, adverse claims	3	.....	.....	30.00	30.00
Cancellation fees .....	.....	.....	.....	3.00	3.00
Amount received for reducing testimony to writing .....	.....	.....	.....	376.13	376.13
Total of all classes of entries and amount received therefrom	953	93,670.01	5,748.48	5,001.13	56,237.28
Salaries, fees, and commissions of register and receiver .....	.....	.....	.....	.....	6,000.00
Incidental expenses .....	.....	.....	.....	.....	1,408.22
Expenses of depositing public money .....	.....	.....	.....	.....	28.70
Total .....	.....	.....	.....	.....	7,432.02

HELENA.

Sales of land subject to pre-emptory entry	61	891.07	.....	.....	\$1,113.84
Sales of land at public auction	27	2,622.56	.....	.....	8,804.92
Sales of timber and stone lands	57	8,287.64	.....	.....	20,719.14
Sales of mineral lands	123	3,974.11	.....	.....	14,722.50
Excess payments on homestead, timber-culture, and other entries and locations.	85	328.91	.....	.....	415.43
Original entries under the desert-land act	967	182,544.96	.....	.....	45,636.63
Final entries under the desert-land act..	213	(33,967.44)	.....	.....	33,967.44
Cash payment on scrip location	2	(99.45)	.....	.....	124.21
Homestead entries commuted to cash under section 2301, R. S.	96	(14,864.16)	.....	.....	18,967.73
Total cash sales	1605	196,649.27	.....	.....	136,174.94
Original homestead entries	1077	168,286.49	\$6,696.78	\$10,155.00	16,951.78
Final homestead entries	469	(62,512.17)	2,727.46	.....	2,727.46
Final entries under the timber-culture laws	19	(2,592.74)	.....	75.00	75.00
Lands entered with private-land scrip ..	5	(859.36)	.....	.....	.....
Cancellation fees .....	.....	.....	.....	47.00	47.00
Lands selected under grants to railroads	262	41,428.04	.....	534.00	534.00
State selections	1283	203,501.12	.....	2,566.00	2,566.00
Indian allotment	1	100.00	.....	.....	.....
Applications to purchase					
Mineral lands	160	.....	.....	1,000.00	1,000.00
Coal lands	27			81.00	81.00
Coal lands	57			570.00	570.00
Reservoir filings	38			114.00	114.00

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Class of Entry.	No.	Acres.	Commissions.	Fees.	Amount.
Mineral protests, adverse claims	12			120.00	120.00
Pre-emption declaratory statements	7	.....	.....	21.00	21.00
Soldiers' and sailors' homestead declaratory statements	2	.....	.....	6.00	6.00
Amount received for reducing testimony to writing .....	.....	.....	.....	400.91	400.91
Total of all classes of entries and amount received therefrom.....	5014	602,031.32	9,424.34	16,480.91	164,080.09
Salaries, fees, and commissions of register and receiver.....	.....	.....	.....	.....	6,000.00
Incidental expenses .....	.....	.....	.....	.....	3,371.28
Total.....	.....	.....	.....	.....	9,371.28

KALISPELL.

Sales of timber and stone lands	50	7,088.38	.....	.....	\$17,720.99
Sales of mineral lands	1	15.61	.....	.....	90.00
Excess payments on homestead, timber-culture, and other entries and locations.	15	79.85	.....	.....	108.16
Original entries under the desert-land act	7	821.03	.....	.....	205.26
Final entries under the desert-land act..	2	(160.00)	.....	.....	100.00
Homestead entries commuted to cash under section 2301, R. S.....	15	(1,825.68)	.....	.....	2,677.18
Total cash sales	90	8,004.87	.....	.....	20,951.59
Original homestead entries	150	21,096.13	\$999.50	\$1,375.00	2,374.50
Final homestead entries	85	(11,721.16)	518.36	.....	518.36
Lands selected under grants to railroads	671	106,740.60	.....	1,342.00	1,342.00
Applications to purchase timber and stone lands	50	.....	.....	500.00	500.00
Cancellation fees .....	.....	.....	.....	2.00	2.00
Amount received for reducing testimony to writing .....	.....	.....	.....	389.30	389.30
Total of all classes of entries and amount received therefrom.....	1046	135,941.49	1,517.86	3,608.1	26,077.65
Salaries, fees, and commissions of register and receiver.....	.....	.....	.....	.....	5,170.06
Incidental expenses .....	.....	.....	.....	.....	1,468.14
Total.....	.....	.....	.....	.....	6,638.20

LEWISTOWN.

Sales of land at public auction	5	360.00	.....	.....	\$690.00
Sales of timber and stone lands	8	833.14	.....	.....	2,082.85
Sales of mineral lands	16	204.00	.....	.....	1,075.00
Cash installments on abandoned military reservation (act of Aug. 21, 1894) .....	.....	.....	.....	.....	117.82
Homestead entries commuted to cash under section 2301, R. S.....	13	29.41	.....	.....	38.05
Final entries under the desert-land act..	273	45,668.01	.....	.....	11,417.07
Final entries under the desert-land act..	101	(13,561.67)	.....	.....	13,561.67
Homestead entries commuted to cash under section 2301, R. S.....	79	(12,351.02)	.....	.....	15,205.91
Total cash sales	493	47,094.56	.....	.....	44,283.37
Original homestead entries	307	45,818.35	\$1,795.67	\$3,940.00	4,735.67
Final homestead entries	113	(15,629.34)	624.95	.....	624.95
Final entries under the timber-culture laws.....	6	(683.05)	.....	24.00	24.00
State selections	504	80,553.12	.....	1,006.00	1,006.00
Applications to purchase	.....	.....	.....	.....	.....
Mineral lands	14	.....	.....	140.00	140.00
Coal lands	12	.....	.....	36.00	36.00
Timber and stone lands	8	.....	.....	80.00	80.00
Cancellation fees .....	.....	.....	.....	4.00	4.00
Townsite filings	1	.....	.....	3.00	3.00

Class of Entry.	No.	Acres.	Commis- sions.	Fees.	Amount.
Amount received for reducing testimony to writing				644.32	644.32
Total of all classes of entries and amount received therefrom.....	1458	173,406.00	2,423.63	4,879.32	51,601.31
Salaries, fees, and commissions of register and receiver.....					6,000.00
Incidental expenses					328.16
Total.....					6,328.16

MILES CITY.

Sales of land at public auction	1	13.57			\$33.93
Excess payments on homestead, timber-culture, and other entries and locations.	15	48.81			62.63
Original entries under the desert-land act	118	23,014.07			5,753.80
Final entries under the desert-land act..	27	(4,786.48)			4,786.48
Homestead entries commuted to cash under section 2301, R. S.....	4	(634.07)			871.50
Total cash sales	165	23,076.46			11,506.04
Original homestead entries	177	37,479.41	\$1,343.01	\$1,730.00	3,063.01
Final homestead entries	43	6,708.78)	289.38		290.23
Final entries under the timber-culture laws.....	2	(320.00)		8.00	8.00
Lands selected under grants to railroads	3	309.55		6.00	6.00
State selections	16	2,659.56		22.00	22.00
Applications to purchase coal lands	2			6.00	6.00
Reservoir filings	4			12.00	12.00
Cancellation fees				1.00	1.00
Amount received for reducing testimony to writing				163.69	163.69
Total of all classes of entries and amount received therefrom.....	412	53,424.97	1,723.39	1,948.69	15,190.12
Salaries, fees, and commissions of register and receiver.....					3,182.22
Incidental expenses					486.23
Expenses of depositing public money.....					6.90
Total.....					3,684.35

MISSOULA.

Sales of land subject to pre-emptory entry	86	7,321.40			\$9,151.71
Sales of timber and stone lands	143	19,727.55			49,318.86
Sales of mineral lands	9	144.40			622.50
Excess payments on homestead, timber-culture, and other entries and locations.	13	88.54			138.07
Original entries under the desert-land act	75	16,894.87			4,308.73
Final entries under desert-land act	16	(3,477.47)			3,477.47
Homestead entries commuted to cash under Sec. 2301, R. S.....	14	(1,692.33)			1,688.91
Total cash sales	327	44,116.78			69,506.24
Original homestead entries	101	14,534.24	\$797.24	\$940.00	1,737.24
Final homestead entries	89	(12,672.09)	730.73		730.73
Lands selected under grants to railroads	941	37,853.48		484.00	484.00
State selections	14	2,090.10		28.00	28.00
Applications to purchase					
Mineral lands	11			110.00	110.00
Timber and stone lands	143			1,430.00	1,430.00
Mineral protests, adverse claims	3			30.00	30.00
Pre-emptory declaratory statements	159			477.00	477.00
Cancellation fees				4.00	4.00
Amount received for reducing testimony					

Class of Entry.	No.	Acres.	Commissions.	Fees.	Amount.
to writing				598.44	598.44
Total of all classes of entries and amount received therefrom.....	1088	98,624.06	1,627.97	4,101.44	75,135.05
Salaries, fees, and commissions of register and receiver.....					6,000.00
Incidental expenses					1,126.07
Expenses of depositing public money.....					79.96
Total.....					7,216.02
Flathead and other Indians (Bitter Root Valley:)					
Full Payments	4	314.41			3,789.21
First Payments	10	861.08			3,490.68
Second Payments	2	(160.00)			224.01
Final Payments	2	(160.00)			224.01
Interest Payments					28.02
Total	14	1,205.49			8,545.25

The local land offices of the state were created by Congressional act or execution order, and opened on the following respective dates:

Bozeman	June 30, 1874	Oct. 5, 1874
Helena	Mar. 2, 1887	Apr. 27, 1887
Kalispell	Mar. 2, 1887	July 1, 1887
Lewistown	Apr. 1, 1880	Nov. 26, 1880
Miles City	Apr. 30, 1880	Oct. 19, 1880
Missoula	Apr. 1, 1880	Apr. 20, 1881

The total land area of Montana is 146,240 square miles, or 93,593,600 acres, and the water area is 821 square miles, or 525,440 acres, or a total area for the state of 147,061 square miles, or 94,119,040 acres. There are but two states in the Union—California and Texas—that are larger than Montana. The state is nearly as large as the Philippine islands, Hawaiian islands, Porto Rico, Pine island, Guam and the Tutuila group of the Samoan islands—the recent acquisitions—all added together.

Water Supply of Montana

For the Season of 1900.

Montana is drained by three large rivers, the Missouri and Yellowstone on the east, and Clarke's Fork of the Columbia river on the west side of the Rocky Mountains. All the tributaries of these three rivers rise in the mountains, and derive their water supply from the melting snow that has been stored there during the winter and spring months. By having a knowledge of the depth, character and distribution of the snow that has accumulated during the months of January, February and March, a reliable general forecast of the water supply for the ensuing season can be made for the different streams of the state. There is one element that enters into the forecast that

cannot at present be foreseen, and that is, a knowledge of temperature. This however, affects the water flow only in the early spring, commonly known as "spring freshets," and occurs in April, May or June.

In the mountains of Montana there are hundreds of canyons and ravines where the sun shines but little, if any, during the day. These deep ravines are the storage places of the water supply. This is an example of Nature's economical distribution of her supplies for man's use. High winds drift the snow into these storage places to a great depth, where, by its own weight, aided by the changes in temperature, it gradually solidifies, in which condition it loses little from evaporation and yields its moisture but slowly and during a comparatively long period during the later spring and early summer. Drifts are also formed at the bases of precipitous cliffs, which if located on the northern slope of the mountains or hills remain until May or June before they entirely disappear, and greatly assist in maintaining a steady flow of water in springs and small streams.

The volume of water in the mountain streams and creeks during the spring freshets that come with the first warm weather of April or May, depends on the depths of snow in the valleys and the foot hills. The high water in the large rivers occurring during the first protracted warm weather in May or June is determined by the depth of accumulated snow in the mountains both above and below the timber line. The drifts in the ravines and canyons remain to furnish the steady flow to the streams during the summer months. The temperature and weather are important factors in the spring freshets and floods. Continued warm weather and warm rains greatly augment the flood stages while warm weather followed by a sudden fall in temperature will greatly lessen the chances of floods, as the slush snow, being frozen, melts more slowly afterwards.

At the beginning of the year 1900, the Montana section of the climate and crop service published, by direction of the chief of the weather bureau, three special snow bulletins, dated January 31st, February 28th, and March 31st. These special bulletins were made up of reports received from two hundred and ninety-four correspondents situated in every portion of the state.

The snow bulletins were of great importance to the mining, stock, and agriculture interests.

The meteorological conditions during the time covered by the snow bulletins and weekly crop bulletins, show the highest mean temperature on record for January and March, and an excess in temperature for January, March, April, May and June; and a deficiency during February, August and September. The precipitation was deficient for January, February, June and July; while an excess is recorded for March, April, May, August and September. The greatest departures from the normal precipitation being a deficiency of 1.89 inches for June, and an excess of 1.15 inches for April. The rainy season occurred in April of this year, instead of the later part of May or in June as it commonly does.

The importance of having accurate reports of the depth of snow on the mountains is very emphatic, as the observations taken by voluntary observers in the valleys does not give all the facts necessary for the intelligent preparation of a seasonal forecast of the water supply for a given section.

E. J. GLASS,

Section Director, Montana Section.

Helena, Montana, November 12th, 1900.

MAXIMUM TEMPERATURE

STATIONS.	January.		February.		March.	
	Max.	Date.	Max.	Date.	Max.	Date.
Adel	68	18	45	21	64	10, 11
Augusta						
Big Timber						79
Billings	56	24	50	2, 14, 18	73	13
Boulder	47	19	50	21, 24	64	31
Agricultural College Bozeman	49	19	46	22	66	11
Butte	47	19	46	24	61	10, 11
Canyon Ferry	48	13	50	21	68	11
Chester						
Chinook	62	18	50	28	63	11
Clemons	60	18	50	23	65	31
Columbia Falls	47	18	47	28	62	11
Corvallis	66	19	64	25	74	11
Crow Agency	54	23	52	6, 28	75	11
Culbertson						
Deer Lodge	60	22	48	25		
Dell	47	13	46	21	63	31
Dillon	58	8	56	20	66	11
Dupuyer					66	11
Elkalaka	56	23	43	22	69	11
Fort Benton	68	18	60	26		
Fort Logan	52	13	47	18	64	10
Glasgow	49	21	46	28	69	11
Glendive	61	19	48	28	70	11
Glenwood	52	19	45	21, 24, 28	67	31
Great Falls	60	18	48	28	68	11
Harlem	60	7	56	28		
Havre	61	18	49	23	69	11
Helena	51	13	52	21	69	11
Kalispell	49	13	46	28	64	11
Kipp	56	18	48	25	63	11
Lewistown			48	28	70	11
Livingston	60	14	47	11, 25	63	12
Manhattan	51	13	51	22	65	22, 23
Martinsdale	54	18	47	21	70	11, 22
Marysville	47	19	42	20, 21, 24	60	11
Miles City	60	19	50	28	74	11
Missoula	46	19	45	10, 20, 25	72	11
Ovando	42	6, 19	43	28	67	31
Parrot	51	19	52	2	65	22
Plains	48	19	47	27	65	11
Poplar	50	19	45	20	68	11
Red Lodge	50	13, 20	52	22	58	11, 12
Ridge	56	28	18	18	68	22, 23
Ridgeland						
St. Paul's			48	25	68	11
Troy	50	6, 13, 19	52	25	69	16, 17
Twin Bridges	52	12, 19	53	26	60	11
Utica	62	19	48	16	70	23
Wibaux	55	23	45	6		
Yale	58	19	46	1, 3, 19	67	12
Fort Yellowstone	37	13	33	2	58	22, 31
Lowell, Wyoming	48	13	47	22	70	11
Parkman, Wyoming			52	22	73	11
Sheridan, Wyoming	53	23	50	6	73	10
Williston, N. D.	63	19	43	28	68	11
Spokane			51	22	69	31

RE AND DATA FOR 1900.

April.	May.	June.	July.	August.	Sept.	October.	Nov.	Dec.
Date.....	Max.	Date.....	Max.	Date.....	Max.	Date.....	Max.	Date.....
18, 19 79	10, 26 97	21 94	21				70	17 58 7
19								67 11
2, 20			110	21 104	2 94	6		60 6
19 22	10 96	21 96	21 96	21 96	2 81	2 70	12, 17 62	3 60 8
6 22	26 96	21 96	21 96	21 96	1 94	2 67	12 60	2 53 6
18 76	10, 26 94	21 96	21 96	21 96	1 78	2 67	17 65 2, 2, 6, 6	54 6
19 87	26 103	21 103	21 103	21 96	1 85	2 70	17 61	
	104	21 103	21 96	16 96	2 83		14 77	11 55 81
22 97	26 109	21 104	21 104	1 94	6			
1, 6 76	5, 7 97	21, 22				73	16 65	11 53 7
20 80	10 93	23 96	20 85	20 80	6, 7 65		17 47	12 49 1
6 19 84	12 96	20 100	20 101	1 83	7, 12 90		12 60	2, 12 60 10
22 98	10 101	22 101	21 90	1 88	6 79		18 72	19 60 20
								46 21
1, 19 80	26 96	21 96	21 96	1 94	2 68		21 60	3 41 5
20, 21 82	26 94	21 91	21 94	1 91	12 70		12 61	3, 6, 12 58 6
81	9, 12 104	22 100	21 90	1				
20 98	27 100	24 106	21	99	2 77	12, 18 63	12	
88	10 108	21 104	11, 15, 21 104	1				
6 98	11 97	21 95	11 90	1 80	2 68	16, 17 60	7 54 6	
19 97	11 109	22 113	21 104	1 86	2 79	18 59	2 50 21	
20 100	26 107	24 111	21 111	1 94	6 82	19 60	2, 12 56 21	
6, 19 84	10 101	21 100	21 96	11 85	3, 7 72	17 61	6 57 6	
19 86	26 108	21 97	25 96	1 79	3 71	18 65	12 60 7	
20 82	26 108	21 99	21 101	1 83	6 80	18 66	8 63 7	
19 83	10 102	21 97	21 94	1 80	2 69	12 63	8 58 6	
20 79	11 92	23 92	24 90	1 80	7 68	18 48	1 50 20	
1 78	11 91	21 92	21 93	1 81	6 70	16, 17, 18 60	12 60 12	
19 89	26 106	21 105	21 95	1 85	6 74	18 66	6 61 7	
86	7 98	21 96	12, 26 90	1 88	6, 7 75	12, 18 64	4 60 7	
21 88	26, 26 99	21	85	22 85	2, 8, 7 71	9, 17 65	3	
2 85	11, 26 104	21 102	21 95	1 86	6 74	17 62	11 56 7	
20 96	23 96	21 95	21 90	1 82	4, 5, 6 68	16, 17 67	6 56 7	
20 96	26 106	21 87	21 106	1 82	6 78	14 68	12 53 7	
1, 6 88	10 94	21		89	7 71	14 69	12 48 20	
6 82	10 92	21 95	21 91	1 84	12 71	17 59	7 56 6	
19 85	26 99	21 102	21 96	1 85	3 69	12, 17 62	8 54 6	
20 82	10 90	21, 22 95	22 87	21, 26 88	1 73	9 63	12 53 7	
20, 22 97	26 105	21, 23, 24 108	21 105	1 86	6 73	18 65	2, 3, 4	
6, 20, 21 77	10 110	26 93	12 96	1 85	1		63 21	
20 96	27 103	24 105	12, 21 104	1				
102	27 104	24 108	21 109	1 80	3 60	14, 22 55	1, 2 53 21	
	103	21 96	21 98	1 81	6 86	24	60 7	
20 85	3 61	20 96	24 89	1 87	7 67	16 64	3 51 21	
19 84	26 96	21, 22 98	21 94	1 87	3 71	12 63	2 53 20	
6 88	12 100	21 98	10 100	1 87	4 74	17 67	12 61 6	
21 96	27 102	24, 25 109	21 109	1 78	2 75	12 52	6	
7 85	27 103	23 97	21 102	1 88	1 72	16, 18 67	2 58 8	
21 77	26 98	21 93	21 93	2 82	7 67	14 67	6 44 3	
19 97	10 105	25 108	21 99	1 86	3 75	12 70	2 64 7	
20 97	26 99	21 103	21 102	1 82	6 78	12, 17 70	3 61 20	
20 91	10, 27 98	25 102	21 100	1 82	6 79	12 72	3 61 20	
20 101	27 102	22 102	21 104	1 85	3 79	18 65	3 46 21	
20 82	3 93	20 100	24 88	20 96	7 69	16 61	10 53 5	

MINIMUM TEMPERATURE

STATIONS.	January.		February.		March.		April.		May.	
	Min.	Date.	Min.	Date.	Min.	Date.	Min.	Date.	Min.	Date.
Adel	-17	28	-28	18	-18	8	29	17	24	27
Augusta										
Big Timber							21	12		
Billings	-11	1	-30	16	-2	4	29	12		
Boulder	-7	28	-38	16	-14	6	19	12	29	2
Agri. College Bosman.	31	28	-34	16	-2	6	26	8	33	13
Butte	0	28	-18	16	1	6	24	8	33	13, 26
Canyon Ferry	-7	1	-35	16	0	6	26	12	36	13
Chester										
Chinook	-17	27	-34	7	-15	6	21	16	34	1
Clemmons	-9	1	-27	14	-8	4, 5	25	7, 9, 12	28	23
Columbia Falls	5	23	-16	16	6	5	25	23	23	26
Corvallis	5	29	-36	16	17	6	27	4	31	24
Crow Agency	-13	1	-27	16	-3	6	23	11, 12, 17	34	2, 3, 15
Culbertson										
Deer Lodge	-2	25	-27	16						
Dell	13	28	-31	16	-1	6	21	8	28	18, 23, 29
Dillon	-3	23	-30	16	-3	6	26	8	30	1
Dupuyer					-13	6			29	28
Elkalaka	-18	28	-26	15	-11	6	18	3	28	2
Fort Benton	-9	27	-18	8, 15					26	1, 3
Fort Logan	-12	1	-29	15, 16	-14	6	18	12	29	16, 23
Glasgow	-20	28	-33	8	-25	6	18	17	24	2
Glenview	-12	28	-35	8	-17	6	23	10	33	2
Glenwood	-4	28	-30	16	-6	4	24	2, 17	27	23
Great Falls	-10	1	-24	15	-6	6	29	12	40	19
Harlem	-25	23	-37	7						
Havre	-25	23	-37	8	-15	6	20	17	26	2
Helena	1	1	-33	16	-4	6	30	12	33	12
Kalispell	4	29	-19	15	8	6	26	8	32	23
Kipp	-20	1	-31	15	-19	6	17	12	27	23
Lewistown		-30	15	-10	6	18	11	27	27	23
Livingston					-4	5			26	15, 19
Manhattan	-9	28	-30	16	-17	6	20	12	31	14, 16
Martinsdale	9	1	-30	16	-6	5	24	12	26	15
Marysville	-2	23	-27	15	-10	2, 4	23	5	33	12, 22
Miles City	-12	28	-16	17	11	6	24	12	26	2
Missoula	6	28	-3	15	12	5, 9	29	2, 23	26, 12, 13, 23, 28	
Ovando	-17	27	-35	15	-6	5	21	4	25	22
Parrot	1	28	-19	16	1	5	26	9	25	23
Plains	6	28	-16	16	16	5	24	8	30	23
Poplar	-17	28	-34	8	-19	6	19	17	29	2
Red Lodge	-15	28	-33	15	-10	5	18	12	30	14
Ridge	-17	28	-35	15	-9	6	17	12	31	2
Ridgeland									33	16
St. Pauls		-30	15	-10	5					
Troy	7	28	-8	15	16	5	27	24	30	25
Twin Bridges	-4	28	-22	15	-10	5	26	4, 7, 16	29	23
Utica	-12	28	-31	16	-12	6	22	17	26	23
Wibaux	-19	28	-29	8			26	3	30	1
Yale	-11	28	-21	15	-5	5, 6	21	13	31	15
Fort Yellowstone	-12	28	-35	16	-4	5	21	11	30	2
Lovell, Wyo	-14	28	-33	16	-3	6	21	1	31	14
Parkman, Wyo		-35	15	-5	6	17	11	32	19	
Sheridan, Wyo	-14	2	-30	16	-1	6				
Williston, N. D	-21	28	-36	9	-15	6	21	12	29	16
Spokane, Wash	15	28	1	15	25	5	28	9	27	21

AND DATE FOR 1900.

June.		July.		August.		September.		October.		November.		December.		
Min.	Date.....	Min.	Date.....	Min.	Date.....	Min.	Date.....	Min.	Date.....	Min.	Date.....	Min.	Date.....	
26	10	30	2									21	26	
										18	27	22	19	
												23	30	
		38	19	43	26	21	25					17	21	
32	10	31	1	30	27	9	26	14		27	20	19	21	
34	10	36	7	37	23	19	27	22	23	18	20	11	21	
35	10	35	1	42	12	30	30	26	27	10	30	11	21	
40	1	10	40	1	40	27	19	26	31	6	12			
						27	27	25	24	20	23	13	21	
38	9	46	1, 2, 12	22	26	30	25					10	30	
31	8							14		27	20	10	30	
34	10	38	12	21	2	17	23	24	18	27	15	23	21	
36	8	39	6, 19	22	23, 24	30	18	27	20	27	22	21	21	
40	10	40	19	43	18	30	26	19		21	19	12	21	
												12	21	
31	10	32	7, 8	34	27	13	27	15	21, 26	20	30	20	21	
35	1	10	22	7	34	9	12	25	24, 30	20	19	15	21	
32	10	36	13	15	25									
35	10	40	13		25	26, 27		24		24	7	30		
45	11	44	1	40	26									
30	10	35	2	21	27	14	26	22	24	20	21	13	13	
40	1	40	10, 11, 20	41	4, 20	30	23	26	19	23	23	19	20, 21	
39	9	43	19	40	26	26	26	23	20	20	20	14	21	
32	10	32	1	25	22	19	27	22	22	21	20	15	21	
40	1	46	1	25	26	22	26	26	24	19	20	2	20	
37	1	44	14	26	27	19	26	22	24	20	20	1	20	
39	1	40	1	42	27	20	26	22	25	17	20	1	21	
38	10	38	3	36	27	24	26	22	27	12	21	10	21	
39	12	35	3	27	27	15	26	5	4, 6	21	21	1	20	
30	10	36	2, 12, 20	30	27	9	26	18	21	25	20	10	20	
40	1	41	6	37	26	22	26	20	28	11	20	2	20	
32	10			26	15	12	27	20	24	17	21			
34	14	34	2, 6	32	27	8	27	18	24	18, 19	20	7	20	
35	8	29	5	27	26	11	25	24	1, 22, 22, 24, 30	24	19	12	20	
40	1	61	15	42	27	22	26	42	1	12	20	2	20	
35	10				26	26, 27		21	27	11	21	2	20, 21	
36	19	34	2, 6	32	27	8	27	12	26	20	19	2	20	
37	19	28	1	42	11, 23	20	26	22	24	12	20			
32	9	40	6, 12	37	27	22	27	22	27	13	21	4	21	
37	10	42	19	39	27	22	27	21	21	24	21			
31	1	35	19	30	6	16	24					17	21	
38	10	45	16	42	27									
37	10, 13	38	19	36	27	19	27	20	21	25	21	14	21	
34	10	40	15	36	27	18	26	16	27	20, 11	20	11	20	
34	12	39	10, 13	24	27	20	26	25	27	8	21	2	21	
32	20	31	14	22	26	15	26	20	21	16	20	13	21	
33	9	37	1	29	26	27	13	26	19	6	24	20	15	20
36	11	40	23	32	26	22	26	20	26	20	21			
31	10	35	19	39	26	19	27, 25	15	24	21	19	20	1	21
30	10	32	19	35	12, 27	12	25	15	20	12	20	25	21	
32	10	36	19	32	9	21	26	22	21	4	20	2	20	
34	10	39	7	40	25	21	27	12	21	11	20	12	21	
38	13	39	19	44	27	25	26	22	25	22	21	10	21	
42	9	47	13	43	26	21	26	26	27	10	21	13	21	

NOTE.—See general index for additional temperature and precipitation tables.

Montana's Hot Springs.

Numerous Hot Springs Whose Waters Carry Healing and Curative Properties—A Future American Carlsbad.

Montana is not given to boasting, in fact, as all its people have been prosperous in the past, their prosperity based on the natural advantages offered by their location, they are not inclined to call the attention of the outside world at all to the innumerable advantages that Nature in her kindness has placed in the custody of the Treasure State.

We have written of the resources and natural advantages of the state that may be used in the development of great industrial and wealth-producing industries, but little mention has been made of the state as a health resort, the item being regarded as of lesser importance, perhaps, by reason of the fact that our people are so healthy that they seldom think of the sick or of the necessity of any form of medicinal remedy.

Of the hot springs within the state and which contain proved medicinal qualities, and which have been placed in condition to serve suffering humanity that may come from other states to receive the benefit of the healing and curative waters, are Hunter's Hot Springs, Gregson's, White Sulphur Springs, Alhambra, Lo Lo Springs, Sleeping Child Springs, Wise's Hot Springs and Pipe Stone Springs. At all of these places there are comfortable and inexpensive hotel accommodations and every convenience for bathing and the various uses of the waters.

Among the springs that have not been brought to general attention, are those located at the head of the Sun river. At present they are a considerable distance from railway facilities, and can only be reached by private conveyance. They are located the most picturesquely in the heart of the Rockies, and there are hundreds who testify to the wonderful curative powers of the waters and to the sedimentary deposit of a ledge matter that contains sulphur, iron, magnesia, potash, aluminum, soda and other minerals in sulphate form and similar in ingredient to the noted Carlsbad Sprudel salts. The matter of this ledge is solvent in water and in recent years has been experimentally and successfully administered in the curing of many skin and blood diseases. When transportation reaches the vicinity and accommodations are provided for the entertainment of guests, these springs will become an American Carlsbad.

With the growth of the state and the wider dissemination of the healthful advantages there are here for the invalids, thousands will come from the east, regain their health and live to sing the praises of the state.

The State Capitol.

The State Capitol is not an elaborate public structure, as such buildings generally go, nor is it expensive, as the cost is limited to \$275,000, but it is ample for the requirements, is substantial and as artistic as a public building should be. It is expected that the building will be ready for occupancy the latter part of the coming summer.

On the first floor the State Land Department will have two rooms and a vault, the Inspector of Mines will have one room, the Inspector of Boilers one room, the State Veterinarian one room, the Boards of Stock and Sheep Commissioners one room, ante-room and vault; the Bureau of Agriculture, Labor and Industry two rooms, the Historical Society one large room, the Adjutant General one room and vault, the Board of Medical Examiners one room, the Board of Equalization one room and vault, the Board of Pardons one room, the Board of Prison Commissioners and Board of Commissioners of the Insane one room, the Board of Examiners and Furnishing Board one room and vault, the State Arid Land Commission, one room, the State Examiner two rooms and vault, the Boards of Health, Dental Examiners and Pharmacy one room, Custodian of the Building one room.

On the second floor the Governor will have a reception room, business office, a room for the private secretary and a vault; the Secretary of State a waiting room, business room, private room and a vault; the Attorney General a waiting room, private room, clerk's room and vault; State Auditor, two rooms and vault; State Treasurer, two rooms and vault; Superintendent of Public Instruction, two rooms; Supreme Court, one court room, three Justices' rooms, one clerk's room, one marshal's office and vault; Law Library, one large library room and Librarian's room.

The third floor is devoted to the accommodation of the Legislative Assembly. The Senate department will have a senate chamber, one retiring room, with cloak and toilet rooms adjoining, and one room each for the Lieutenant Governor, Secretary and Sergeant-at-arms, and four committee rooms. The House will be accommodated with an assembly room, one retiring room, with cloak and toilet rooms, and one room each for the Speaker, Clerk and Sergeant-at-arms, and six committee rooms.



THE CAPITOL OF MONTANA, IN PROCESS OF CONSTRUCTION AT HELENA. FROM A COPYRIGHTED DRAWING BY BELL & KENT.

Libraries of the State.

The following statistics and interesting particulars of the libraries of the state were secured by Mary C. Gardner, of the Helena Public library. Miss Gardner finds that Montana has forty-one public libraries, using the term in a broad sense. Seven of these are supported by local taxation, and are public libraries strictly speaking. They are located respectively at Bozeman, Butte, Dillon, Great Falls, Helena, Kalispell and Missoula. The organization of the Parmly Billings Memorial Library will be accomplished shortly, making an eighth library supported by a city tax. The State Library (two departments) and the libraries of the State University, the State College of Agriculture and Mechanic Arts, and the State Normal School all receive public money for their support. Other institutions, such as the State Prison, Reform School, the Soldiers' Home, the Home for Orphans and the Deaf and Dumb School, have small collections of books which have been acquired without state aid. Several libraries are supported by private educational institutions, for the use of students and faculty, namely those of the College of Montana, Montana Wesleyan University and Saint Vincent's Academy. A number are supported by library associations, clubs or other organizations. According to statistics gathered by the writer, the number of volumes has increased from nearly 160,000 in June, 1899, to nearly 191,000, a gain of 19 per cent. School libraries, which have increased from a total of 16,500 to almost 33,000 volumes, are included in the number. The loans for home use from Montana libraries amount to about 300,000 annually. The following table shows, in round numbers, the number of volumes in each of the libraries of the state:

Anaconda.	
Hearst Free Library	Number of Volumes 6,000
Boulder.	
Library of Montana State Deaf and Dumb School	200
Bozeman.	
Bozeman Free Library	8,200
Library of Montana State College of Agriculture	6,000
	14,200
Butte.	
Butte Free Public Library	20,000
Butte Miners' Union Library	600
Library of Medical Association of Montana	300
Butte Fire Department Library	300
Pioneer Library (Knights of Labor)	500
Canadian Institute	200
Literary Society Freja Library	200
Library of Montana Society of Engineers	100
Christian Science Reading-room and Library	100
	22,500
Columbia Falls.	
Library of Montana State Soldiers' Home	1,000

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Deer Lodge.		
College of Montana Library	4,000	
Montana State Prison Library	1,400	5,400
Dillon.		
Dillon Public Library	2,500	
Montana State Normal School Library	2,700	5,200
East Helena.		
Public Library and Reading-room		1,000
Great Falls.		
Valeria Public Library		6,500
Helena.		
Montana State Library-Historical and Miscellaneous Department....	15,500	
Montana State Library-Law Department.....	10,500	
Montana State Superintendent of Public Instruction—Office Library	800	
Montana State Bureau of Agriculture, Labor and Industry—Office Library	700	
United States Weather Bureau—Office Library	200	
Helena Public Library	30,000	
Helena Fire Department Library	200	
Montana Wesleyan University Library	2,300	
Sacred Hearts Library	1,000	
Montana Diocesan Library (Roman Catholic)	2,200	
Saint Vincent's Academy Library	1,000	
Montana Grand Lodge Masonic Library.....	2,000	
Montana Club Library	1,000	
Post Library, Fort Harrison	2,100	79,000
Kalispell.		
Public Library		1,200
Miles City.		
Library of Montana State Reform School.....		100
Missoula.		
Missoula Free Public Library	5,000	
Montana State University Library	6,000	11,000
Sand Coulee.		
Sand Coulee Library Association		1,200
Twin Bridges.		
Library of Montana State Home for Orphans	100	
Public Library	1,400	1,500
Montana School District Libraries		23,000
Total		190,200

Following are a few historical and statistical facts concerning the more important libraries of the state. The matter has been collected largely by Mr. Frank C. Patten, formerly librarian of the Helena Public Library:

Anaconda.—The Hearst Free Library is the gift of Mrs. Phoebe A. Hearst, as a memorial to her husband, the late Senator Hearst, of California. It was established in March, 1895, in temporary quarters, with about 2,000 volumes. The present building was completed in 1898, at a cost of \$60,000. It is 72x75 feet, and two stories in height. The materials are granite and pressed brick. The finish is in quarter-sawed white oak. The walls and ceiling are beautifully colored. The main floor is devoted to the loan department and the general reading room. On the second floor there are the reference department and meeting and club rooms. There are about 6,000 volumes. About 1,000 are added yearly. The periodicals currently received number 86. Loans for home use are about 28,000 volumes a year. The library is open twelve hours a day.

Billings.—Mr. Frederick Billings, Jr., son of the late Hon. Frederick Billings, of New York, has donated to the city of Billings a \$20,000 library building, in memory of his brother, Parmly, who lived there years ago. The building, 60x54 feet, is of native sandstone. The style of architecture is Romanesque. The base is of granite 18 inches high, the cornice of copper, and the roof of Spanish tile. The basement, which is 12 feet in height, and almost entirely above ground, contains the heating plant and fuel room in the rear, with a room for club meetings occupying the remainder of the space. The main floor will be the library proper. The ceiling is 15 feet high, and is



THE PUBLIC LIBRARY—HELENA.

arched. The interior finish is of oak. The floors are of maple. The building is located in a park donated by the Northern Pacific railway. The city has voted a tax to purchase books and maintain the library.

Bozeman.—The public library occupies a room of about 1,100 square feet in the City Hall. There is a collection of about 8,200 books. The loans for home use aggregate 15,000 a year. There is no reading room. The library is open four hours a day for three days in the week. Revenue is derived from a city tax of one-half mill on the dollar, which now yields about \$1,000 a year.

Butte.—About 1891 Mr. Charles X. Larrabee offered \$10,000 toward a library if the citizens would add \$10,000 to it. The result was that the friends of the library project were able to offer \$22,000 as a book fund, provided that the city would erect a suitable library building, and properly support the

library. In 1893 the city erected a \$100,000 building and gave the institution the main floor, about 5,000 square feet, elegantly furnished. The revenue for the support of the library is derived from a city tax of one mill, which yields about \$17,000. The use is free to all residents of Silver Bow county. There are about 30,000 volumes, and the loans for home use are about 90,000 volumes a year. The library is well selected. The collection of books on all subjects relating to mining is excellent. There is also a good collection of art works. There are about 200 current periodicals in the reading room. The library is open thirteen hours a day.

Dillon.—The Dillon Public Library began as a book club, with an annual fee of \$5.00. Since 1888 it has been a free library. In 1896 a city tax of one mill on the dollar was voted. The library is open two evenings in the week from 7 o'clock until 10. There are about 2,500 volumes. The loans for home use are about 5,000 a year. No reading room is maintained.

Great Falls.—A number of citizens formed a library association in 1889. They erected in 1891, with funds raised by subscription, a library building costing \$3,500, on a lot donated by the townsite company. In April, 1892, the property was transferred to the city, on condition that at least \$3,000 annually be given for the support of the library. There are about 6,500 volumes, and 22,000 volumes a year are loaned for home use. The open hours are from 10:30 a. m. to 9:30 p. m. The library has so outgrown the capacity of its building that the trustees have recommended to the City Council the erection of an addition. The Council has ordered the addition, which is to cost not more than \$2,000. The library's capacity will thus be doubled. A public-spirited citizen has offered to donate to the library, upon completion of the improvements, \$1,000 worth of books.

Helena.—In 1870 Congress appropriated \$2,500 for a territorial library. This was the beginning of what is now the State Library. In 1881 the Legislature established the Montana Law Library, and in April, 1891, the Montana Historical Society, which dates from February, 1865, transferred to the state its collection of books and other property, and the Historical Library became a part of the State Library. The law department contains about 10,500 volumes. The historical and miscellaneous department has about 15,500 volumes and 12,000 pamphlets. There are 95 current periodicals received. Most of these are Montana publications. There are over 800 bound volumes of Montana newspapers, dating back to 1864. The library contains many valuable diaries, journals, records, letters and other manuscripts, and a good collection of Montana maps. Two volumes of historical contributions have been published. The historical museum is growing rapidly, and in it may be found many rare treasures illustrating Montana history and that of the northwest in general. About \$5,000 is expended annually for the support of the library. The law department is open seven hours a day. The historical and miscellaneous department is open six hours. The library now occupies rooms in the Lewis and Clarke county court house. Upon the completion of the new State Capitol Building the library will be moved there.

The Helena Public Library had its beginning in 1868 as a subscription library. In 1886 it became a public library supported by a city tax. In 1892

the city erected in connection with the Auditorium a \$10,000 library building, 35x80 feet, and three stories in height. The support of the institution is derived from a city tax of three-fourths of a mill on the dollar, yielding about \$7,500. There are about 30,000 volumes and about 15,700 pamphlets. Over 10,000 volumes of the loan department are kept on open shelves. The reading room contains about 3,000 reference books and over 500 current periodicals. About 90,000 volumes a year are loaned for home use. Special pains is taken to meet the needs of teachers, students and young readers. The library is open thirteen and a half hours a day.

The Montana Grand Lodge Masonic Library is a reference library for Masons only. There are about 2,000 volumes and 5,000 pamphlets. About 50 current periodicals are on file in the reading room in the Temple.

Sacred Hearts Library was started in 1888, and is maintained for the parish of the Roman Catholic Cathedral of the Sacred Hearts. A small monthly fee is charged for its use. The library is open every afternoon. There are about 1,600 volumes.

The Montana Club has a library of about 1,000 volumes, begun in 1882. It is a reference library for the use of members only. About 25 current periodicals are received.

Kalispell.—The library was founded in December, 1897. Revenue for its support was obtained by giving entertainments, etc., until May, 1900, when the people voted to support it as a free library by a city tax. The fee of \$1.00 a year for borrowing books was then done away with. There are about 1,200 volumes. The library is open five and a half hours daily. A large use by the children is reported.

Missoula.—A tax of one mill on the dollar, yielding about \$2,500 yearly, is devoted to the support of the Public Library, which was organized in 1894. A literary club gave a small collection of books as a beginning. There are now about 5,000 volumes, and 55 periodicals are currently received for the reading room. The loans for home use are about 15,000 volumes a year. The library occupies rented rooms, and is open five hours a day.



THE PUBLIC LIBRARY—BUTTE.

The Schools.

GREAT FALLS PUBLIC SCHOOLS.

One of the most potent forces in attracting people of culture and refinement to settle in a community or city is that of providing adequate and effective school facilities. In this particular the people of Great Falls have been exceptionally active. They have always provided liberally in advance for the pressing demands of their rapidly increasing school population.



WHITTIER SCHOOL - GREAT FALLS.

In 1886 she had one school building worth five hundred dollars, one teacher and twenty pupils. To-day she has ten large buildings, which, with equipment and grounds are valued at a quarter of a million dollars, a teaching force of forty-eight, that will compare favorably with the corps of teachers of any city in the country, and a school census of over twenty-six hundred children. The building capacity is fifty-two times, the teaching force forty-eight, and the school census over one hundred and thirty times what it was fourteen years ago. This gives some idea of the demands made upon the people to keep pace with the growth.

The schools have grown from an ungraded school of instruction in 1886 to a thoroughly graded system that is second to no city in the northwest, comprising primary, grammar and high school departments.

The primary department extends through the first four years of the child's school life, and includes the following course of instruction: Reading and spelling, form and drawing, color, plants and animals, paper folding, modeling, oral and written language, numbers, geography, penmanship, morals and manners, music and calisthenics.

The Grammar department comprises the work of the fifth, sixth, seventh and eighth years, and includes instruction in the following: Reading and spelling, oral and written arithmetic, language, literature and composition, plants and animals, natural phenomena, geography, history and civics, physi-

ology and hygiene, map-drawing, penmanship, drawing, morals and manners, music and calisthenics.

The high school offers three complete courses of instruction of four years each, any one of which, if care is observed in the selection of options, will prepare students for admission to our leading colleges and great universities, and will give such educational training as will enable the student to pursue



GREAT FALLS HIGH SCHOOL.

an independent course of study, or a successful business career.

The Latin course includes four years' work in Latin and in English, two in German, one-half year each in physical geography, botany, physiology, ancient history, Greek history, Roman history, United States history and civics, one year and a half each in algebra and geometry, one year in physics, two years of two periods per week in drawing.

The scientific course, is identical with the Latin course, except that one year in chemistry, and one year in geology or astronomy are substituted for the third and fourth years of Latin.

In the English course word study, English grammar, arithmetic, book-keeping, English history and English literature are substituted for the four years' of foreign languages. In the eleventh and twelfth years of this course the students may select from the other two.

The "English" in all the courses includes "in logical correlation, orthography, composition, rhetoric, the history of English and American literature, and the reading of English and American classics, with the idea of gaining power in the use of the English language, and acquiring a knowledge of and a taste for the best literature."

Music is given a period daily under the direction of a special teacher.

Rhetoricals are required of each pupil once in eight weeks throughout the four years.

The method of instruction in all the departments is to harmoniously develop all the powers of the child—physical, intellectual and moral—to make a true manhood and womanhood. It is intended that the work of the school shall help the child to help himself, shall make him an independent thinker, self-reliant and self-confident, and thus a helpful factor in the community in which he shall live.

The excellent course of instruction provided in the schools has been attracting an increased number of tuition pupils to the city each year, and today the schools are recognized as the best in the northern and eastern parts of the state. The tuition is small, being based upon the actual cost of the instruction.

THE BILLINGS SCHOOLS.

(By Prof. H. M. Brayton, Superintendent.)

Like other fast growing cities, Billings has made rapid progress in matters educational. In 1884 the first brick school building was constructed. In 1892 the Third Ward school was built, and in 1898 a temporary building of two rooms was constructed. Already all of these buildings are inadequate. At the present time an eight-room building is being finished, four rooms of which will be occupied by January 3, 1901. The upper floor of this new building is intended for high school purposes, and will be equipped with every modern appliance for the comfort and convenience of the students.

The school sentiment of this city is favorable to every proposition that will advance its school interests, a fact well evidenced by the votes of many taxpayers to secure a larger and more adequate high school building, only six votes being cast against the bond proposition. Besides this an even greater evidence of school spirit was shown in 1899, when all of the special school tax except ninety dollars was voluntarily paid, thus enabling the Billings schools to remain in session during the entire school year of 1899-'00. The residents of districts adjacent to our city appreciate the advantages

which our schools offer, and nearly all of them having children of school age, who are no longer accommodated by their own schools, now send them here. About 6 per cent. of the entire enrollment last year consisted of non-resident pupils.

Few school boards are so consistently persevering in their determination to secure only professional teachers. The present corps of sixteen teachers has been gathered from various successful schools, and everyone has either a college diploma, a normal school diploma, or its equivalent in successful experience.

In the matter of equipment, the pupils have the benefit of what is the latest and best in all departments. Each room, from the first to the eighth grade inclusive, has a specially selected library of juvenile books adapted to the pupils' needs and ability. The high school library, of several hundred volumes, is especially selected with reference to the literature outlines for college preparation, besides containing a wide diversity of interesting and instructive matter on science, arts, history, biography, geography, adventure, travels, moral, religious, etc. The laboratory, for which a room is specially fitted, was recently equipped for doing experimental work in the sciences required for college entrance. The botanical instruction is facilitated by use of five imported compound microscopes (Richart's). To all of which apparatus the school board annually adds such material as breakage or new subjects render necessary.

The course of study in the grades is thoroughly up to date, including, besides the very essential "three R's," such subjects as singing, nature study and drawing, all of which are regularly taught in all grades below the high school. The high school course includes all subjects prescribed by the State Board of Education, and in the development of these secondary branches the teachers are making a special endeavor to do work of a quality to meet the approval of the faculties of such higher educational institutions as our graduates may enter. This is done in the thorough belief that quality, rather than quantity or kind, is the most essential element of high school development, giving to each student real power for future work, whether his schooling ends with the high school or is continued in college or normal work.

A large percentage of the graduates of the Billings high school are now attending higher institutions of learning, and more than half of the present class of 1901 intend to continue their studies in higher schools.

Nothing could more plainly express the high aims and educational spirit pervading our schools than the above fact. Students are quickly influenced by their school environment, and nothing outside the assistance of good teachers is so helpful as association with ambitious students.

GALLATIN COUNTY HIGH SCHOOL.

The Gallatin County Free High School is located at Bozeman. The school was established in the summer of 1899. In July of that year the people of Gallatin county voted to establish such a school in accordance with

the provisions of the county free high school law enacted at the previous session of the Legislature. The school is maintained by a special tax of one mill levied on all the taxable property of the county.

The board of trustees organized in August, 1899, and elected a principal. Two assistant teachers were employed, and the school was first opened on September 11, 1899.

The total enrollment of the first year was ninety-two. The enrollment at the beginning of the second semester of the present school year, in January, will be one hundred and forty. The great majority of the persons enrolled are residents of Bozeman, but the number of pupils from outside districts is increasing, and will be this year 15 per cent. of the total number. The school now employs a principal and three assistants, and a special teacher of drawing.

Three courses of study, each providing a period of three years, are provided. The graduates of the school are admitted without examination to the state institutions of higher education.

A good beginning has been made in supplying the school with a proper equipment. The library of works of reference on history contains sixty carefully selected volumes, and the sum of three hundred dollars has been expended in the purchase of apparatus and appliances used in the study of the natural sciences.

The school is at present being held in a rented building, but it is the intention of the board of trustees to erect, during the coming summer, a building that will be in every way adapted to present and future needs.

BUTTE PUBLIC SCHOOLS.

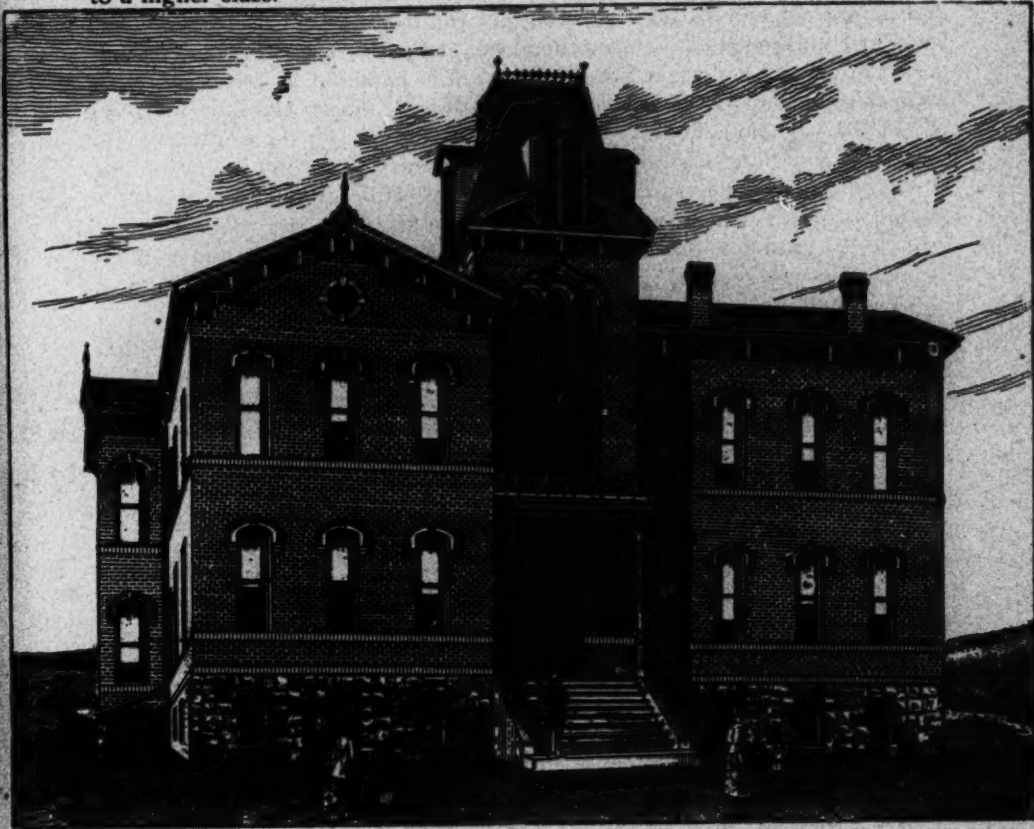
The schools, churches and libraries of a city are an index to the moral and intellectual standard of the people. They are the arteries which carry the pure civic blood throughout the system, giving a healthful, inspiring character to the people, thus preventing those degenerating tendencies which would otherwise fasten themselves upon the community.

Butte is noted the world over for its mining industries. Everything seems to be swallowed up in this one great employment, together with those other activities that are in fact a part of, or incident to the great and absorbing industry of the city. Its public school system is not, therefore, an obtrusive factor forcing itself upon the attention of the visitor. It is none the less, however, an institution of marvelous efficiency, thrilling every home in the community with its helpful and inspiring touch, and doing more than can be told in giving to the rising generation an intelligent and sturdy manhood and womanhood.

The organization of the school system is modeled after those found in the most progressive cities of the east. The course of study covers a period of twelve years, divided into a primary department of four years, a grammar department of four years, and a high school department of four years. The work of each year or grade is divided into two divisions so that only an

interval of five months separates the different classes, thus making it possible for pupils somewhat in advance of their class to "catch up" with the class in advance, and so move on as rapidly as their capabilities will permit.

The regular promotions from one class to another throughout the entire system occur at the beginning and middle of the year, but special promotions are made whenever a pupil's proficiency is such as to justify his advancement to a higher class.



A GRADED SCHOOL—BUTTE.

The system is flexible, and is at all times made to serve the interests of the child.

The course of study for the primary and grammar grades includes all the common branches usually taught in a well regulated school system. These branches are recognized as having two distinct and legitimate functions connected with the school activities; (1) to serve as means of stimulating into healthy activity the dormant powers which the child possesses, and (2) to give him that fund of practical knowledge which is necessary and desirable in performing the ordinary business transactions of life. These are the two accomplishments which combine to prepare the youth of our land for honorable and useful citizenship. As the great majority of children do

not go beyond the grammar grades, every possible effort in system, supervision and instruction is put forth to make the work of these grades effective in producing intelligent and self-dependent young men and women.

The high school takes up the work where it is terminated by the grammar grades, and carries it forward with two distinct objects in view. One course of study is designed to give a broad and thorough education to those young men and women who, desirous of extending the work of the grammar grades, are not able to take advantage of the facilities afforded by the colleges and universities. This is, therefore, distinctively a general and complete course, and is designed to give those who pursue it as broad and comprehensive a view of life and nature as is possible during the four years required for its completion.

Another course of study preparing for admission to higher institutions of learning, is provided for those who expect, after graduation, to take a college or university course. This course is so arranged, and the instruction given is so thorough that upon its completion pupils are admitted without examination to several of the strongest colleges and universities of the land.

The buildings necessary to accommodate the school system at the present time include a magnificent central high school and thirteen ward buildings, conveniently located in different parts of the city, together with a large number of rented annexes to accommodate the overflow of attendance. These buildings are for the best part modern, beautiful and up-to-date in everything that pertains to heating, ventilation, and in those things which look to the comfort and convenience of the pupils. New buildings to meet the demands of the growing city, and to take the place of old and inadequate structures are being erected every year, and yet so rapid is the growth of the city that it is practically impossible for the board of trustees to keep pace with the demands made upon it for school room. It is not, however, ill advised to say that with the progressive ideas of the board of trustees and their splendid financial management of the affairs of the district, Butte is destined in a very few years to have the finest and most modern school buildings to be found in any city in the great northwest.

To take proper care of the seven thousand children enrolled in the city schools requires the full time and energies of one hundred and seventy teachers and supervisors.

This number includes one superintendent, fourteen principals, two special teachers, a clerk and two office assistants. This large corps of teachers and supervisors has been selected with reference to their scholarship and teaching ability, and it is because of their real moral and professional worth that the schools have reached their present degree of excellence.

The present efficient system is the result of years of careful thought and study on the part of the boards of trustees, of wise management and direction by the superintendents who have had charge of them, and, if possible, even more of the faithful and efficient services of the large corps of teachers who have so skillfully and uncomplainingly performed the laborious duties which have devolved upon them from year to year.

There is, and there can be, no question as to the future of the Butte schools. Not only are the people able to maintain a system of the highest

efficiency but there exists a public sentiment that gives assurance not only that such a system will be maintained, but that its efficiency will be increased wherever it is possible to do it by means that have been tested and proved to be effective and rational.

The following statement is taken from President Mueller's address to the graduating class, June, 1899:

"In 1882, seventeen years ago, 14 teachers were employed in the Butte schools at a monthly salary of \$785, to teach less than 900 pupils. The census for the year was 1,456, and the total expenditures were \$14,404. The value



HIGH SCHOOL-BUTTE.

of school buildings, sites and furniture was \$44,150. Ten years later, or in 1892, the little corps of 14 teachers had been increased to 63, and the monthly pay-roll to \$6,500, while the census had grown from 1,456 to 5,037, and the total expenditure had been increased to \$154,000. Last year, 1898, the number of teachers had increased to a total of 112, the census to 8,447, with a monthly pay-roll of over \$10,000; a total expenditure of \$170,450, and school property valued at \$400,500. This year, 1899, there are now 131 teachers employed, an increase of 19 over 1898, and a conservative estimate places the increase of the corps of teachers for the opening of the schools in September at 150; the census at 9,350; the monthly pay-roll at \$12,000; the total annual expenditure for the year at over \$200,000, and the value of school property at \$425,000. The growth of the schools the past years from 1894, can be shown by the actual facts as follows:

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Years	Teachers	Enrollment	Attendance	Census
June, 1894	77	3,557	2,681	5,145
June, 1896	87	3,065	2,326	5,323
June, 1896	83	4,181	3,253	5,086
June, 1897	98	4,400	3,500	6,364
June, 1898	113	5,485	3,655	6,394
June, 1899	131	6,162	4,474	8,447

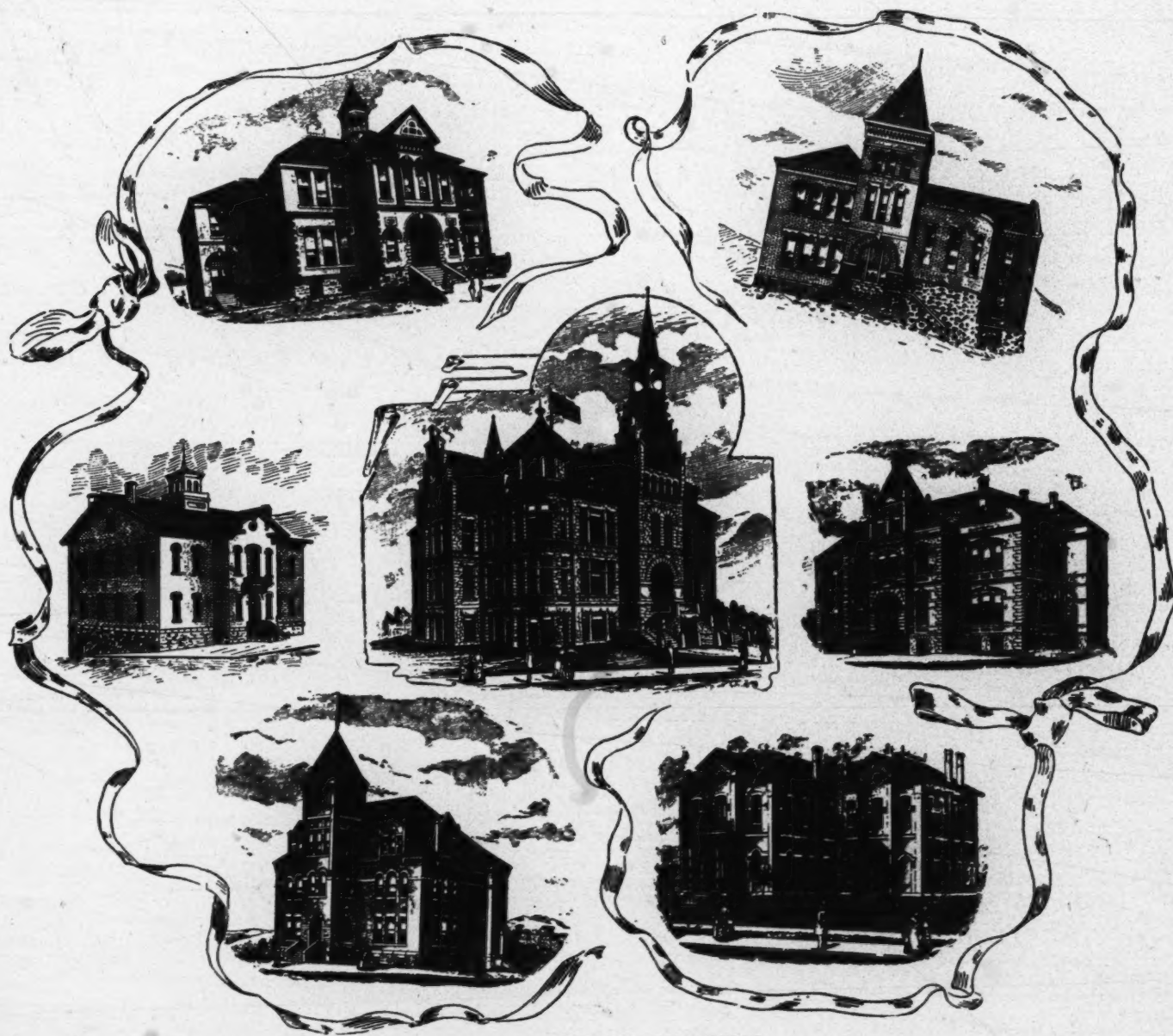
The above facts show an increase in five years in the census of 3,302 pupils, or 64 per cent.; 2,068 pupils, or 73 per cent. in the enrollment; 1,842 pupils, or 64 per cent.; 2,608 pupils, or 73 per cent. in the enrollment; 1,842 it will certainly not be less, it will not be difficult to estimate the number of teachers, the expenditures and the census of the school population from year to year. If we base our calculations upon these facts, the present board of trustees and their immediate successors in office will be called upon to provide as follows:

Years	Teachers	Enrollment	Attendance	Census
1900	150	7,100	5,300	10,000
1901	175	7,900	6,500	11,500
1902	210	8,300	7,500	13,100
1903	250	10,000	8,500	14,500

This will mean an increase in expenditures of more than \$40,000 a year, or an increase of \$200,000, or even more, in five years, without taking into consideration the many buildings to be erected and appliances to be provided."

GROWTH SINCE 1887.

Years	Teachers	Total Enrollment	Census (School Age)	Increase
1887-88	24	1,967	2,904	.....
1888-89	28	2,157	3,252	358
1889-90	29	2,301	3,881	529
1890-91	36	2,696	4,400	519
1891-92	43	3,045	4,680	280
1892-Dec	77	3,477	5,037	357
1893-Dec	80	3,624	5,145	108
1894-Dec	87	3,794	5,323	178
1895-Dec	98	3,800	5,685	362
1896-Dec	98	4,019	6,354	669
1897-Dec	112	4,865	6,294	540
1898-Dec	121	5,547	6,447	1,553
1899-Dec	131	6,225	6,347	900
1900-Dec	163	6,500	10,400	1,653



HELENA'S PUBLIC SCHOOL BUILDINGS.

DESCRIPTION AND VALUATION OF SCHOOL PROPERTY AND FIXTURES.

NAME OF SCHOOL	Character of Structure	Erected	No. of Stories	No. of Rooms	VALUATION		
					Sites	Buildings	Furniture and Fittings
New High School....	Stone and Brick	1897	3	500	\$12,000	\$125,000	\$5,000
Washington	Stone and Brick	1896	3	1050	30,000	60,000	2,000
Lincoln	Stone and Brick	1892	3	750	4,000	35,000	2,250
Garfield	Stone and Brick	1892	3	680	5,000	30,000	2,000
Madison	Stone and Brick	1896	1	130	1,000	4,500	400
Monroe	Stone and Brick	1890	2	300	2,000	11,000	900
Grant	Stone and Brick	1890	2	480	2,200	11,000	1,440
Franklin	Frame	1897	1	330	Leased..	5,000	2,210
Adams	Brick	1886	3	380	2,500	16,000	1,140
Blaine	Stone and Brick	1890	2	210	2,000	11,000	950
Jefferson	Brick	1896	1	200	500	7,500	480
Sherman	Frame	1896	1	90	600	1,000	150
Jackson	Brick	1892	1	100	500	3,000	300
Greeley	Brick	1897	1	180	1,000	5,000	650
Travonia	Brick	1886	1	50	750	1,000	150
Atlantic St.....	Brick and Stone	1899	3	750	5,000	30,000	2,000
Aluminum St.....	Stone and Brick	1899	3	550	2,800	25,000	2,500
Hobart	Frame	1900	1	200	1,700	2,500	1,500

THE HELENA PUBLIC HIGH SCHOOL.

It is but just to say that no city in the west is more wise and generous in providing for the welfare of her school children than Helena.

With a population of twelve thousand inhabitants, Helena has six graded school buildings, ranging in size from five to ten rooms each, and other smaller buildings in which fewer rooms are utilized. These buildings are well lighted; supplied with hot air or steam plants, and otherwise furnished with all modern conveniences. Neither work nor expense has been spared to make these buildings attractive and healthful for the children who daily congregate within their walls.

With an enrollment of more than two thousand one hundred pupils and a daily attendance of one thousand eight hundred; with a corps of forty up-to-date teachers working along lines of the most approved schools of the United States, Helena has just cause to be proud of her schools. There is a supervisor of drawing, and art expression constitutes an important feature of the school work.

In the training school are the primary grades, in which the members of the training class see all the best theories and highest ideals practically illustrated in the daily work of the school.

To the curriculum of the past four years there has been added this year two departments, viz., a kindergarten department, accommodating more than one hundred pupils, and a manual training department, accommodating two hundred and fifty pupils. Each department is under the supervision of a specialist, and these advantages will be extended to each building in the city at the discretion of the board, as permitted by the funds of the district.

The aim of the high school is that of giving to all who come under its influence a training which shall enable them to realize the highest develop-

ment possible during a period of four years. It is not technical, but rather seeks to inculcate a spirit of broad, thorough scholarship, which is the best foundation for future work. In the arrangement of the course of study, two classes of students are taken into consideration. The first includes all who wish to pursue a course of study in some higher institution of learning; the second class places more emphasis upon a preparation for the practical duties of life.

Students upon entering the high school, or as soon thereafter as possible, are encouraged to determine upon some plan of work for the future, and thus secure every advantage that the school may offer in the way of preparation. The course of study provides for four years work in Latin, English and mathematics, three and one-half years in German, two each in Greek and French, and two years in the sciences, including one year of physics. By substituting equivalents in some minor cases, a student may prepare for admission to any of the best universities, or take such studies as will best fit him for active, practical business life.

The high school building is one of the finest in the west. It is modern and complete in all of its equipments, containing in all seventeen rooms, besides a large gymnasium. A library of eight hundred volumes; physical and chemical libraries fully equipped with the latest improvements and apparatus, a convenient art room well supplied with drawing materials contribute to the efficiency of the work.

At the present time the faculty is composed of ten teachers, eight of whom are specialists in charge of a department. The enrollment is three hundred and one. Of these thirty will graduate in June, 1901.

MEMORANDUM OF ATTENDANCE, ANNUAL EXPENDITURE, AND PER CAPITA COST, HELENA SCHOOLS.

Years	Attendance	Expenditure	Per Capita Cost
School Year 1880-81.....	1163	\$50,000	\$43.00
School Year 1891-92.....	1298	60,559	46.66
School Year 1893-94.....	1426	60,762	42.61
School Year 1894-95.....	1535	61,679	40.46
School Year 1895-96.....	1540	67,800	37.54
School Year 1896-97.....	1662	66,961	34.28
School Year 1897-98.....	1683	62,165	31.57
School Year 1898-99.....	1796	50,002	29.15
School Year 1899-1900.....	1744	58,045	33.28
School Year 1900-1901—Estimated.....	1806	66,000	31.00

THE ANACONDA SCHOOLS.

As the city of Anaconda is yet in her infancy, the history of her school system is naturally a short one.

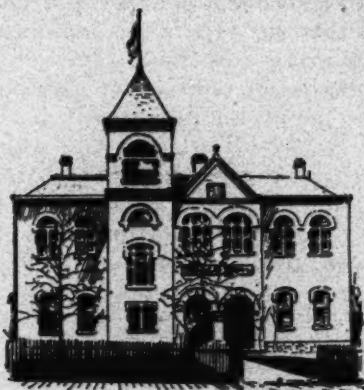
About seventeen years ago there was a log school house situated about where the Montana hotel now stands, in which the few pupils of the vicinity

assembled to hear words of wisdom and sage advice from the school master, and to trace the "day's disaster" in the "morning face" of no less a personage than Judge M. J. Fitzpatrick. Today the Judge presides over a solemn conclave of men known as the Anaconda school board, which directs the educational cultivation of more than 1,500 school children.

"Dominie" Fitzpatrick could thrash the average "daily attendance" twice over during recess.

"President" Fitzpatrick holds a guiding hand over 40 school teachers and 1,600 school children, accommodated in six buildings and occupying 40 rooms.

The first school held in Anaconda proper was opened in "the little church around the corner" of the Montana hotel. A three-room building was next



HIGH SCHOOL-ANACONDA.

erected where the present high school stands. Three other rooms were piled upon top of these to meet the rapid growth of the school census. A little frame building situated on West Third street was next mustered into service, and dignified with the name of the "Grant school."

Mr. J. P. Gannon was principal of the schools in those days. His staff consisted of six teachers.

During the administration of his successor, Mr. A. C. Stone, now of Missoula, the high school first made its appearance, with Miss Emma Wave as principal. In this year, 1890, the Prescott was built. Mr. Stone was severely criticised by some indignant citizens for putting the new school house "away out in the country," as they said. Today the Prescott is in the heart of the west side.

It has six rooms with a seating capacity of 300.

The Lincoln, at the corner of Fifth and Chestnut, was next erected (1892). It contained six rooms, and was well constructed and furnished with many modern conveniences.

Two years later the Bryan school, so called in honor of the famous champion of silver, was added. It has six rooms and a seating capacity of 280.

In 1898 the Lincoln school was completely destroyed by fire. On the same site was erected the Lincoln of today, which for size, durability and

equipment, is unsurpassed by any school building in the state. It has 18 rooms, and can accommodate almost a thousand pupils.

Besides the above, the city system includes a small building called the West End school, about two miles up the canon, and a two-room building at Carroll, about a mile east.

The total enrollment of the Anaconda schools in December, 1900, was 1,603, the average number belonging, 1,336, and the average daily attendance, 1,268. The school census shows 3,146 children under 21 years of age.

Since Mr. Stone's time there have been three superintendents, viz., F. L. Kern, M. A. Stapleton and R. R. Kilroy, the present incumbent.

Considering the rapid growth, the people of Anaconda have every reason to be proud of their school system. Hampered by the necessity of continued construction, the numerous exigencies of a growing population, and the miserable apology that has been doing business as a school law, the schools have overcome many difficulties, until today, for equipment and organization they are thoroughly representative of the progressive west.

The Newspapers of the State.

The newspapers during the past year enjoyed, with the other industrial institutions of the state, the prosperity and progress that has been general. There have been but few new ventures in the field, but several of the dailies, notably the Great Falls Tribune and Leader and the Butte dailies, have been greatly improved. In Helena, the Record was established, and the Evening Herald and Morning Independent have been brought up to the highest standard of metropolitan journalism. The newspapers of Montana, including the country press, are far and away ahead of similar publications anywhere on the continent, except the great productions of the eastern cities, and Montana is justly proud of them, and contributes to their support with pleasure. The list of newspapers failing to respond to the bureau inquiries is larger this year than usual, but that is accounted for by the fact that the circulars were sent out just when the journals were engaged in a warmly contested political campaign, and their time and attention was fully occupied.

DIRECTORY OF NEWSPAPERS IN MONTANA.

Tribune	Dillon	F. E. Foote, Mgr.....
Examiner	Dillon	
Messenger	Townsend	C. H. Eaton
Star	Townsend	
Picket	Red Lodge	Walter Alderson, Mgr
Democrat	Red Lodge	J. D. Matheson
Times	Belt	R. H. Bemis, Mgr
Churchman	Great Falls	Pastor of
Leader	Great Falls	W. R. Connor, Bus. Mgr.
Tribune	Great Falls	O. B. Worden
Montana Herald	Great Falls	Waldemar Stein
News	Great Falls	O. M. Holmes
Herald	Havre	
Milk River Eagle	Havre	N. C. Westcott
Herald	Nelhart	Abbott & Preston
River Press	Ft. Benton	W. K. Harbor, Mgr.
Opinion	Chinook	W. C. Kester
Times	Forsyth	Lyndes & Co., Mgrs.
News	Miles City	James G. Ramsey
Stockgrowers' Journal	Miles City	H. G. Potter
Yellowstone Journal	Miles City	Sam Gordon
Independent	Glendive	J. R. Widemyer
Review	Glendive	
Standard	Anaconda	W. E. Shandrew, Sec'y.
Silver State	Deer Lodge	A. D. Hoas
Montana Churchman	Deer Lodge	Rev. E. G. Prout, Mgr.
Argus	Lewistown	John M. Vrooman
Democrat	Lewistown	
Bee	Kallispell	Bee Publishing Co.
Herald-Journal	Kallispell	Moore & Houts
Inter-Lake	Kallispell	R. M. Goshorn, Mgr.
Montanian	Libby	D. A. Hendricks
News	Libby	Frank M. Leonard
Miner	Sylvanite	G. E. Shawler

Avant-Courier	Boseman	Chas. R. Alderson, Mgr.....
Chronicle	Boseman	F. B. Hoas, Bus. Mgr.....
College Exponent	Boseman	Ed Burk, Mgr.....
Republican	Boseman	
The Call	Philipsburg	L. R. Hoas
Mail	Philipsburg	Bryan Bros. & Hauck.....
Progress	Basin	F. N. Wild.....
Age	Boulder	F. E. Cornish.....
Sentinel	Boulder	S. A. Robertson
Zephyr	Whitehall	Daniel Searies
Christian Advocate	Helena	Methodist Episcopal Church.....
Churchman	Helena	St. Peter's Episcopal Church.....
Herald	Helena	E. L. Boardman, Mgr.....
Independent	Helena	John S. M. Neill, Mgr.....
Montana Staats Zeitung	Helena	Neugele & Son.....
Northwest Instructor	Helena	W. —, Hutton, Editor.....
Northwestern Odd Fellow	Helena	L. O. O. F.
Record	Helena	E. J. Willis, Bus. Mgr.....
Stockman and Farmer	Helena	John W. Pace
The Workman	Helena	Ancient Order of United Workmen.....
Record	East Helena	J. T. Farris
Republican	East Helena	John Mills
Mountaineer	Marysville	
Sentinel	Pony	A. W. Noyes
Weekly Chinook	Sheridan	F. B. Linderman.....
Madisonian	Virginia City	J. T. Smith
Alder Gulch Times	Virginia City	
Monitor	Twin Bridges	B. F. Bowman.....
Rocky Mountain Husbandman	White Sulphur Spgs. R. W. Sutherland	
News-Letter	Plains	O. Gould
Plainsman	Plains	
Fruit Grower and Missoulian	Missoula	C. H. Edwards
Democrat-Messenger	Missoula	Pearson, Turk & Co.....
Enterprise	Livingston	Frank Wright, Sec.....
Bitter Root Times	Hamilton	
Western News	Hamilton	Miles Romney
Republican	Hamilton	
I. O. G. T News	Stevensville	Ind. Order of Odd Fellows.....
Northwest Tribune	Stevensville	J. R. Faulds
Inter Mountain	Butte	M. B. Berger, Mgr
Montana Journal	Butte	H. Rosensweig
Miner	Butte	M. M. Miller, Mgr.....
Reveille	Butte	A. W. Brouse
Times	Butte	James Brown
Tribune-Review	Butte	Oates & Dunstan
Western Mining World	Butte	Chas. Hellbronner.....
High School Leader	Butte	
Express	Big Timber	Walter Aitkin
Pioneer	Big Timber	L. C. Olmstead
Yellowstone Leader	Big Timber	W. J. Hannah.....
Chronicle	Choteau	John E. Low.....
Montanan	Choteau	
Acantha	Dupuyer	Geo. W. Magee
Gazette	Glasgow	
Enterprise	Malta	J. D. B. Greig
Gazette	Billings	E. H. Becker.....
Times	Billings	M. C. Morris
News	Billings	

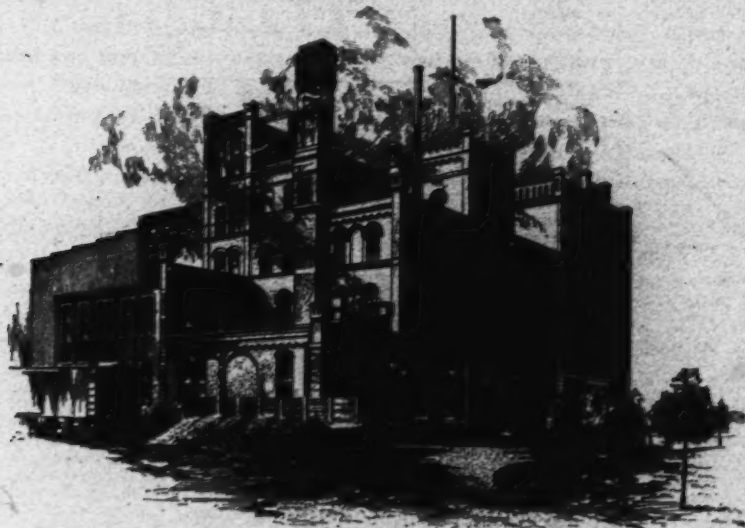
The Breweries of the State.

Making Beer and Malt One of the Growing Industries of Montana—The Barley Raised in the State Superior to That Raised in Any Other Part of the World.

The making of beer is one of the later industries of the state, but within the past three or four years it has grown to be an important element in local industrial life. While the making of this beverage is new in Montana, authorities on the subject state that it was made in China as far back as 2,207 B. C., and there are records of sumptuary laws that date back a thousand years earlier than that. Scandinavian mythology places the beverage with the nectars to be adored, and from that down there is a record with every period of the age. It is not the intention, however, to give the history of beer from its invention by Isis, but rather to call attention to the prominence and rapid growth of the manufacturing industry in this state, and to mention the special reasons that warrant the prediction that in the near future Montana will be one of the chief beer-producing states in the Union. The excellence of Montana's barley for malting and beer-making was first brought to public attention by the Manhattan Malting Company, which produces its barley in the Gallatin valley, and sells its malt to the world. It has been demonstrated by practical tests that Montana barley is superior for beer-making to that produced in any other part of the world, and since this knowledge has become general among the manufacturers of this line of beverage, it has created a domestic and foreign demand that far exceeds the supply. The encouragement of the lively demand is stimulating the raising of barley, and the output of the state in this line will experience a very rapid increase.

The Montana Brewing Company was organized at Great Falls in 1898, and has been particularly notable as an entire business and industrial success. The value of the plant of this company is in excess of a quarter million dollars, and it has a brewing capacity of two hundred barrels per day. Last year the output of the brewery was fifteen thousand barrels, and this year it will exceed sixteen thousand barrels, and over eighteen thousand cases of beer. The annual cellar capacity of the brewery is forty-five thousand barrels. The malting plant has a capacity of 100,000 bushels per year, and in this, the first year of its operation, its output was twenty-five thousand bushels, and will be run up to its full capacity during the coming year. The establishment of this plant not only added a very important industry to the resources of Great Falls, but it has proved of direct benefit to the farmers of the county, by providing them with a cash market for all the barley they can produce. The barley raised in the immediate vicinity so far has not nearly met the

requirements of the brewery, but the production is increasing rapidly, and will supply the demand in the next two or three years. When this condition is realized the county will receive the full benefit of the industry, as all the money expended for raw material, with the exception of hops, will remain at home. The success of the institution has been in a great measure due to the excellence and purity of the beverage produced, and this has been secured through having the most perfect system of brewing, and employing all the modern improvements known to the trade, using only the best grades of materials, and taking every possible care in the course of manufacture. The malting plant is one of the most modern as well as the largest in the west. The barley is never handled by men, but is elevated, spread and turned by



MONTANA BREWERY—GREAT FALLS.

machinery, and the work of nature is not interfered with while the germ is being sprouted in the barley. The malting of the barley raised in Cascade and neighboring counties has proved that the product is just as good as the noted barley of the Gallatin valley. The soil and the climate of this section of the state, for growing barley, are just what is a necessity to the best production of the cereal. The latitude is the natural home for barley, and if the farmer gives it the proper care and attention, he will be sure to harvest a big crop. It is known that where wheat grows well there barley will flourish also, and with far less labor. Today the price of barley is 55 to 60 cents per bushel, and wheat is only 60 to 65 cents, and since the same field that produces 35 bushels per acre of wheat will yield 50 to 55 bushels of barley, making in actual figures \$21 income from one acre of wheat and \$33 income from barley, there is, therefore, a net gain of \$12 in raising barley. Again, it is safe to say that barley has always a more standard price, and does not fluctuate so much as wheat and other cereals.

The American Brewing Company of Great Falls also has a large and modern plant, and is rapidly increasing its output. Among the other large brewery plants of the state are Kessler's at Helena, and the Centennial at Butte.

SEVENTH ANNUAL REPORT OF BUREAU

REPORTS OF BREWERIES FOR YEAR ENDED JUNE 30, 1900

Condition of business as compared with year pre-ceeding	Dec.	
	Inc.	Dec.
Value	\$24,000	20
Barrels of beer made	6,000	10
Weight of barley per bushel	55.000	10
Value of malt per bushel	2,570	37
Price of barley per bushel	18,340	35
Amount of malt imported during year (Bushels)	15,131	30
Am't of malt bought or made during y'r (Bushels)	20,200	same
Amount of barley imported— (Bushels)	3,600	20
Amount of Montana barley used— (Bushels)	14,500	4
Amount paid for labor during year..	\$48,816	
Business done during the year	100,480	
Amount invested in buusiness		
Weeks brewery in operation during yr		
Number of Employees		
Tracing Number....		

* Increase 24.52. ** Increase 25.70.

Reports of the State Banks.

The report of the State Examiner, Mr. John G. Morony, states that the capital and surplus of twenty-one National banks, thirteen private banks, and fifteen state banks, is \$5,849,393.56, and the deposits \$28,732,447.96. The same authority gives the following returns of the state banks of the state:

STATE AUDITOR'S SUMMARY OF STATE BANK REPORTS.

Report of the Condition of the 15 State Banks of the State of Montana, on June 30, 1900.

RESOURCES.	LIABILITIES.
Loans on real estate\$ 453,526	Capital Stock*\$ 500,000
Loans on collateral security other than real estate 408,190	Surplus fund. 190,300
Loans and discounts—all other.... 3,536,180	Other undivided profits (less expenses and taxes paid) 279,964
Overdrafts 495,397	
United States bonds 1,620	Dividends unpaid 1,900
State, county and municipal bonds and warrants 781,806	
Other stocks, bonds and securities 20,129	Deposits subject to check \$4,717,963
Judgments, etc. 120,563	Deposits—Saving .. 1,948,065
Due from banks and bankers..... 1,220,913	Total deposits 6,666,028
Real estate, furniture and fixtures 218,910	
Checks and other cash items..... 55,900	Due to other banks and bankers.. 623,257
Cash on hand, viz:	All other liabilities 205,010
Gold coin .....\$300,900	
Gold certificates 12,500	
Silver coin 21,627	
Silver certificates 14,303	
Legal tenders 168,008	
National bank notes 23,615	
Not classified 374,694	
Total cash on hand 814,432	
All other resources 1,965	
Total resources.....\$6,366,203	Total liabilities .....\$6,366,203

* Dividends paid during the past year on Capital Stock:

Amount 6 banks with capital of \$470,000.00 paid \$2,000

Per cent rate 11 per cent

REPORTS OF THE CONDITION OF STATE BANKS

BANK.	RESOURCES.				
	Location.	Loans and Discounts.	Overdrafts.	Stocks and Bonds.	State and County Warrants.
Bank of Fergus County ...	Lewistown	541,045.04	25,477.36	.....	2,719.28
Bank of Boulder	Boulder	110,799.34	1,118.22	.....	16,211.81
Ravalli County Bank	Hamilton	54,460.05	221,504.76	.....	41,014.39
Carbon County Bank	Red Lodge	128,400.62	13,770.23	500.00	912.95
State Bank of Nelhart	Nelhart	25,460.97	9,161.01	.....	1,354.91
Cascade Bank	Great Falls	264,753.23	14,834.09	34,103.75	26,226.73
Union Bank & Trust Co.	Helena	532,771.22	7,310.95	39,500.00	220,229.64
Judith Basin Bank.	Lewistown	225,495.24	2,312.11	.....	1,622.32
State Bank of Dillon	Dillon	198,411.12	6,000.01	.....	1,494.10
Bank of Twin Bridges	Twin Bridges	24,120.50	22,224.97	2,500.00	6,052.70
State Bank of Townsend ..	Townsend	23,175.12	12.00	542.50	5,022.09
Elling State Bank	Virginia City	111,412.09	129,266.80	600.00	2,116.20
Thos. Cruse Savings Bank ..	Helena	217,787.22	5,022.15	425,100.00	42,403.54
State Savings Bank	Butte	1,226,761.24	142,072.72	26,502.23	25,909.73
		2,096,114.42	617,222.90	621,420.58	415,541.40

BANKS.	LIABILITIES.				
	Location.	Capital Stock Paid In.	Contingent Fund. (Surplus)	Undivided Profits.	Individual Deposits Subject to Check.
Bank of Fergus County ...	Lewistown	200,000.00	20,000.00	97,812.51	199,054.04
Bank of Boulder	Boulder	30,000.00	1,000.00	5,226.52	26,626.76
Ravalli County Bank	Hamilton	50,000.00	.....	5,515.64	102,774.93
Carbon County Bank	Red Lodge	60,000.00	.....	2,322.25	26,579.46
State Bank of Nelhart	Nelhart	20,000.00	.....	191.00	25,645.25
Cascade Bank	Great Falls	75,000.00	15,000.00	12,942.02	204,796.95
Union Bank & Trust Co.	Helena	100,000.00	15,000.00	12,968.99	318,210.58
Judith Basin Bank.	Lewistown	75,000.00	.....	15,276.66	77,724.94
State Bank of Dillon	Dillon	60,000.00	.....	.....	70,320.61
Bank of Twin Bridges	Twin Bridges	25,000.00	.....	.....	41,970.79
State Bank of Townsend ..	Townsend	25,000.00	.....	1,212.18	22,045.52
Elling State Bank	Virginia City	60,000.00	.....	5,266.52	270,261.82
Thos. Cruse Savings Bank ..	Helena	100,000.00	20,000.00	68,420.74	642,412.56
State Savings Bank	Butte	100,000.00	100,000.00	42,402.70	977,664.22
		950,000.00	181,500.00	272,691.22	2,422,171.55

AT THE CLOSE OF BUSINESS NOV. 30, 1896.

RESOURCES									
Banking House Furniture and Fixtures.	Other Real Estate.	Suspense Account.	Judg- ments.	Ex- pense.	Cash Items.	Due From Banks.	Cash.	Rever- sine Stamp.	TOTAL.
5,000.00	45,261.90	794.35	7,644.78	.....	6,852.87	106,837.12	80,287.00	.....	808,458.90
4,250.00	.....	1,106.50	.....	.....	.....	91,331.19	8,539.23	.....	293,296.20
19,203.12	.....	.....	.....	.....	1,900.51	11,446.06	26,967.89	287.31	297,145.43
8,739.24	.....	.....	.....	.....	685.75	29,510.25	18,976.53	.....	215,462.47
1,500.00	12,360.00	.....	.....	.....	.....	12,321.40	5,112.00	.....	77,294.80
2,343.55	6,003.12	534.97	785.06	3,979.96	10,200.49	82,350.21	42,780.20	.....	562,942.71
620.35	.....	.....	.....	.....	5,122.07	269,035.11	128,714.16	.....	1,414,874.20
12,162.40	.....	.....	.....	.....	496.09	21,500.78	6,025.00	440.10	281,762.27
812.50	.....	.....	.....	1,257.55	.....	37,000.77	9,249.89	.....	195,022.95
1,197.22	2,040.59	62.25	1,061.65	.....	.....	18,968.77	12,968.66	.....	95,122.12
2,714.04	.....	1,209.46	.....	.....	.....	18,868.30	12,968.66	.....	95,122.12
.....	.....	.....	.....	.....	1,152.96	228,222.76	18,875.26	.....	498,737.06
7,461.54	54,466.25	.....	.....	.....	4,899.76	185,914.21	260,509.44	.....	1,104,449.21
77,929.61	25,432.95	.....	4,110.42	.....	45,343.62	802,172.26	422,737.94	.....	3,000,932.51
148,298.18	156,617.04	2,727.75	12,561.91	8,237.41	75,000.22	2,061,257.62	1,002,494.89	727.20	2,902,240.14

LIABILITIES.								
Public Deposits.	Demand Cer- tificates.	Time Cer- tificates.	Certified Checks.	Cash- ier's Checks.	Due to Banks.	Bills Payable.	Savings Deposits.	TOTAL.
102,520.22	9,022.28	156,779.22	4,117.97	2,600.06	9,624.79	.....	.....	802,458.90
55,463.82	20,594.70	16,000.00	.....	.....	.....	.....	.....	222,296.20
95,612.27	72,294.21	.....	.....	234.75	90,947.29	.....	.....	297,145.43
60,679.27	14,902.59	.....	.....	.....	4,122.60	.....	.....	215,462.47
12,422.86	6,642.96	9,420.25	.....	.....	1,034.12	.....	.....	77,294.80
126,970.04	9,322.76	102,576.22	35.00	270.62	2,972.00	.....	.....	562,942.71
242,249.25	75,126.04	.....	289.28	2,850.28	447,220.14	.....	.....	1,414,874.20
10,127.16	8,462.21	60,900.00	.....	.....	.....	25,000.00	.....	281,762.27
4,075.06	2,040.59	25,711.75	.....	.....	1,205.62	.....	.....	195,022.95
.....	11,101.06	769.54	.....	.....	12,291.74	.....	.....	95,122.12
.....	16,580.22	.....	.....	.....	.....	.....	.....	95,122.12
22,214.21	27,611.20	.....	.....	.....	2,200.22	.....	.....	498,737.06
.....	202,264.45	.....	1,000.00	1,697.42	5,174.65	.....	62,298.22	1,104,449.21
574,961.45	119,227.22	216,750.96	200.00	180.00	20,572.44	.....	747,429.50	3,000,932.51
299,522.25	616,758.57	709,007.73	5,702.25	9,712.08	600,246.11	25,000.00	720,737.75	2,902,240.14

Production of Coal and Coke.

PRODUCTION OF COAL AND COKE FOR THE YEAR 1896 BY COUNTIES.

COUNTY.	Coal produced.	Total value.	Tons of Coal Used in Making Coke.	Tons of Coke Produced	Total Value.	No. of Ovens.
Carbon	271,546	\$382,004.20	.....	.....	.....	.....
Cascade	b 960,161	a 658,136.15	30,553	9,309	45,386.65	100.00
Choteau	1,130	1,360.00	.....	.....	.....	.....
Gallatin	63,969	101,550.40	.....	.....	.....	.....
Meagher	50	125.00	.....	.....	.....	.....
Park	121,565	c 231,314.00	102,860	61,026	484,425.00	118.00
Total	1,460,421	\$1,386,025.75	128,413	70,235	\$29,924.65	218.00

a Does not include the value of 384,930 tons.

b Does not include the 20,553 tons made into coke.

c Does not include the value of 12,197 tons.

PRODUCTION OF COAL AND COKE FOR THE YEAR 1896 BY COUNTIES.

COUNTY.	Coal produced.	Total value.	Tons of Coal used in Making Coke.	Tons of Coke Produced	Total Value.	No. of Ovens.
Carbon	225,774	\$440,923.00	.....	.....	.....	.....
Cascade	a 864,005	1,346,526.25	22,688	10,540	62,096.74	100.00
Choteau	1,370	2,740.00	.....	.....	.....	.....
Custer	1,042	1,634.00	.....	.....	.....	.....
Fergus	2,787	5,788.00	.....	.....	.....	.....
Gallatin	56,271	94,074.46	.....	.....	.....	.....
Granite	47	141.00	.....	.....	.....	.....
Lewis and Clarke	50	212.50	.....	.....	.....	.....
Meagher	50	125.00	.....	.....	.....	.....
Park	b 127,776	334,702.00	117,897	48,526	529,622.00	118.00
Totals	1,468,771	\$2,226,835.20	140,536	59,072	\$61,773.74	218.00

a Does not include 22,688 tons made into coke.

b Does not include 117,897 tons made into coke.

PRODUCTION OF STONE FOR THE YEAR 1898

COUNTRIES	GRANITE		LIMESTONE		MARBLE		SANDSTONE		LIME MADE		MISCELLANEOUS	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
Carbon	b, 800 cu. ft.	\$ 100 00	b, 400 cu. ft.	\$800 00			b, 5,000 cu. ft.	\$4,800 00	340 tons	\$2,800 00		
Cascade							m, 500 cu. ft.	500 00				
Dear Lodge												
Lewis and Clarke	b, 1470 cu. ft.	7,400 00			m	\$4,900 00			2,600 tons	6,600 00		\$3,595 55
Medaner									20 tons	375 00		
Yellowstone							b, 15,000 cu. ft.	3,000 00				
							c, 23,100 cu. ft.	405 00				
Total	3070 cu. ft.	\$7,500 00	400 cu. ft.	\$800 00		\$4,900 00	44,460 cu. ft.	\$9,003 00	3,130 tons	9,815 00	4,090 cu. ft.	\$4,666 86

PRODUCTION OF STONE FOR THE YEAR 1899

COUNTRIES	GRANITE		LIMESTONE		MARBLE		SANDSTONE		LIME MADE		MISCELLANEOUS	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
Carbon	b, 4000 cu. ft.	\$1,760 00					c, r. b., 6,000 yds.	\$12,000 00	413 tons	\$3,415 00		
Cascade							c, 9,000 tons	2,100 00	873 tons	5,213 00		
Dear Lodge							m, b, 8,000 cu. ft.	3,050 00				
Lewis and Clarke	b, 6470 cu. ft.	8,250 00							1,400 tons	14,000 00		\$973 00
Medaner									140 tons	1,000 00		
Yellowstone									10 tons	300 00		
Total	10470 cu. ft.	\$10,010 00	48,000 tons	\$16,400 00	200 cu. ft.	\$1,000 00	b, 174,250 cu. ft.	21,000 00	3,540 tons	\$21,507 00		\$973 00

b—building; s—smelters; m—monumental; f—flux for smelter; c, p—calcined plaster; yards; r, r—railroads.

Clay Products.

CLAY PRODUCTS FOR THE YEAR 1898

COUNTY	Testing No.	Common Building Brick	Value	Front Building Brick	Value
	1	880,000	6,100.00	.....	.....
	2	180,000	1,440.00	.....	.....
Total Carbon County		1,060,000	7,540.00	.....	.....
	3	1,800,000	10,800.00	.....	.....
	4	.....	.....	.....	.....
	5	.....	.....	.....	.....
Total Cascade County		1,800,000	10,800.00	.....	.....
	6	6,000,000	42,420.00	155,000	2,015.00
	7	7,000,000	56,000.00	350,000	5,000.00
	8	1,300,000	10,300.00	128,000	3,012.80
Total Deer Lodge County		14,300,000	108,720.00	633,000	10,027.80
Total Gallatin County	9	700,000	4,000.00	.....	.....
Total Lewis and Clarke County	10	1,800,000	11,700.00	33,000	512.00
Total Missoula County	11	1,000,000	7,500.00	.....	.....
Total Park County	12	400,000	2,400.00	.....	.....
	13	54,000	.....	.....	.....
	14	4,000,000	20,000.00	.....	.....
	15	3,000,000	15,000.00	.....	.....
	16	500,000	3,000.00	.....	.....
	17	11,100,000	71,800.00	.....	.....
	18	1,200,000	6,000.00	.....	.....
Total Silver Bow County		9,954,000	115,500.00	.....	.....
Total Yellowstone County	19	75,000	675.00	.....	.....
Grand Total		41,125,000	269,025.00	625,000	10,539.80

CLAY PRODUCTS FOR THE YEAR 1898—Continued

Alumina Fire Brick	Value	Silica Fire Brick	Value	Feet of Sewer Pipe and Drain Tile	Value	Value of Miscellaneous Clay Products	Total Amount Expended for Labor
.....	.....	.....	.....	.....	.....	.....	2,300.00
.....	.....	.....	.....	.....	.....	.....	1,300.00
.....	.....	.....	.....	.....	.....	.....	4,448.00
.....	.....	.....	.....	.....	.....	.....	7,900.00
.....	.....	307,700	6,240.00	.....	.....	.....	2,772.00
100,000	3,500.00	.....	.....	.....	.....	.....	1,000.00
.....	.....	.....	.....	.....	.....	.....	11,072.00
100,000	3,500.00	307,700	6,240.00	.....	.....	.....	.....
982,000	57,316.00	516,000	13,638.00	.....	.....	.....	73,775.00
1,850,000	50,000.00	500,000	23,600.00	.....	.....	.....	.....
.....	.....	.....	.....	42,000	900.00	800.00	.....
2,302,000	57,316.00	1,016,000	42,108.00	42,000	900.00	800.00	73,775.00
.....	.....	.....	.....	.....	.....	.....	1,500.00
30,000	1,000.00	.....	.....	45,000	0,172.00	2,300.00	21,300.00
.....							
.....							
.....	.....	.....	.....	.....	.....	.....	8,000.00
.....	.....	.....	.....	.....	.....	.....	24,000.00
.....	.....	.....	.....	.....	.....	.....	15,000.00
.....	.....	.....	.....	.....	.....	.....	2,000.00
.....	.....	.....	.....	.....	.....	.....	3,000.00
.....							
.....	.....	.....	.....	.....	.....	.....	44,000.00
.....							
.....							
2,302,000	51,308.00	1,212,700	42,348.00	42,000	17,102.00	2,700.00	120,704.00

CLAY PRODUCTS FOR THE YEAR 1899

COUNTY	Tyng No.	Common Building Brick	Value	Front Building Brick	Value
	1	500,000	4,500.00	.....	.....
	2	100,000	1,000.00	.....	.....
	3	300,000	2,700.00	.....	.....
Total Carbon County	..	900,000	8,200.00	.....	.....
Total Cascade County	4	50,000	500.00	.....	.....
Total Custer County	5	400,000	3,300.00	.....	.....
	6	900,000	7,300.00	500,000	3,000.00
	7	1,450,000	10,150.00	.....	.....
Total Deer Lodge County	..	2,350,000	17,350.00	500,000	3,000.00
Total Fergus County	8	300,000	2,000.00	.....	.....
	9	40,000	400.00	20,000	200.00
	10	1,400,000	5,300.00	.....	.....
Total Flathead County	..	1,440,000	5,300.00	20,000	200.00
Total Jefferson County	11	450,000	4,000.00	.....	.....
Total Lewis and Clarke County	12	2,500,000	12,000.00	.....	.....
	13	350,000	2,450.00	.....	.....
	14	1,000,000	7,000.00	.....	.....
Total Missoula County	..	1,350,000	9,450.00	.....	.....
Total Ravalli County	15	450,000	2,700.00	.....	.....
	16	1,500,000	9,000.00	.....	.....
	17	1,000,000	6,500.00	.....	.....
	18	3,500,000	22,400.00	20,000	200.00
	19	550,000	4,675.00	.....	.....
Total Silver Bow County	..	7,550,000	42,575.00	20,000	200.00
Total Yellowstone County	20	400,000	2,800.00	.....	.....
	..	18,140,000	112,075.00	520,000	3,500.00

REPORTS OF SAW MILLS FOR

Tracing No.	Number employees		No of weeks mill operated	Amount in-vested in the industry	Amount of business done	Amount paid for labor	No. of feet of lumber cut	Value of saws at mill	Number of shingles produced	Value of saws at mill	Number of logs produced
	Male	Female									
1	6	...	6	2,400.00	1,200.00	500.00	150,000	1,200.00	.....	.....	.....
2	8	...	8	2,000.00	1,300.00	1,400.00	110,000	1,600.00	100,000	250.00	.....
3	18	...	18	7,000.00	3,000.00	6,000.00	1,000,000	7,500.00	.....	.....	.....
4	3	...	2	1,500.00	600.00	370.00	100,000	1,000.00	75,000	150.00	.....
5	2	...	2	300.00	1,000.00	300.00	100,000	1,000.00	.....	.....	.....
6	3	1	4	3,500.00	.....	.....	.....	3,000.00	.....	.....	.....
7	35	...	35	10,000.00	5,000.00	6,000.00	533,000	4,264.00	.....	.....	.....
8	5	...	5	1,500.00	700.00	150.00	70,000	700.00	40,000	100.00	.....
9	5	...	5	2,000.00	320.00	231.00	129,000	908.00	.....	.....	.....
10	350	...	350	750,000.00	287,000.00	150,151.23	24,730,362	192,022.42	.....	.....	2,932,500
11	5	...	5	3,000.00	1,300.00	150.00	100,000	2,000.00	.....	.....	.....
12	5	...	5	2,000.00	4,500.00	1,000.00	300,000	3,000.00	.....	.....	.....
13	5	...	5	4,000.00	3,500.00	1,750.00	300,000	3,600.00	.....	.....	.....
14	45	...	45	14,000.00	45,326.00	20,326.30	2,800,000	15,000.00	.....	.....	.....
15	3	...	3	15,000.00	2,100.00	210.00	305,000	3,075.00	.....	.....	.....
16	27	...	27	9,000.00	4,000.00	24,000.00	7,000,000	43,000.00	.....	.....	.....
17	3	...	3	2,500.00	7,800.00	1,800.00	900,000	7,800.00	.....	.....	.....
18	24	...	24	25,000.00	23,000.00	11,571.79	2,600,000	20,000.00	.....	.....	.....
19	1	...	1	1,500.00	3,000.00	470.00	300,000	3,000.00	.....	.....	175,500
20	9	1	10	4,000.00	.....	.....	1,000,000	6,000.00	.....	.....	50,000
21	10	...	10	10,000.00	6,000.00	4,000.00	300,000	1,000.00	.....	.....	.....
22	1	...	1	1,000.00	325.00	50.00	30,000	300.00	.....	.....	.....
23	10	...	10	60,000.00	100,000.00	10,000.00	500,000	3,500.00	.....	.....	.....
24	5	1	5	2,000.00	6,000.00	2,700.00	600,000	4,800.00	.....	.....	.....
530	3,692	615	615	\$336,000.00	\$496,425.50	\$61,035.32	43,647,952	\$22,144.42	215,000	500.00	4,128,000

THE YEAR ENDING JUNE 30, 1900

Value of saws at mill	Value of all other products	Number of feet of dressed lumber	Value of same (excluding value of the rough lumber)	Value of saws, shingles and other manufactures	Condition of business compared with 1899	Cause of suspension
.....						Timber and labor is higher and demand less. Suspended.
.....	400.00	.....	.....	.....	.....	Could not get timber from government to saw.
.....		750,000	635.00	.....	About same	.....
.....					About same	.....
.....	100.00	.....	.....	.....	About same	No sale for lumber..
.....					35 per ct. inc.	Suspended mill to get logs.
.....		118,000	118.00	.....	No	Erecting new plant in new location
.....		20,000	200.00	.....	Good	Farming and a logging contract
.....					Same	Other work to attend.
4,325.75		6,000,000	7,500.00	25,000.00	About same	.....
.....		20,000	200.00	.....	Small inc.	No business
.....					35 per ct. inc.	Other work.
.....		50,000	200.00	.....	30 per ct. inc.	.....
.....		4,220,000	13,900.00	.....	11 per ct. inc.	Bad weather and bad roads
.....					Good	Other work
.....					Good	.....
.....		50,000	200.00	.....	Same	Winter
351.00	500.00	1,000,000	.....	.....	Same	.....
150.00		50,000	75.00	.....	5 per ct. dec.	No demand
.....					Good	.....
.....					30 per ct. inc.	.....
.....		50,000	10,000.00	.....	15 per ct. inc.	.....
.....					50 per ct. dec.	Lack of building.
4,325.75	1,000.00	13,623,000	53,918.00	25,000.00	.....	Prospects of short crops

REPORT OF FLOUR MILLS FOR YEAR ENDED JUNE 30, 1900

Tracing No.	Number employed.	Weeks operated.	Capital invested.	Amount of business done.	Amount paid for labor.	No. of Weeks	No. of bushels of wheat ground.	No. of bushels wheat imported.	Average price of wheat.	Total lbs. of flour produced.	Total lbs. of feed produced.	Capacity of Mill—Barrels.	Percent of increase over 1899.	Reason for increase or decrease.
1	10	52	20,000	.....	3,000	5	.....	none	55	315,000	162,500	60	Decrease	Loss of crops from frost
2	1	52	.....	.....	.....	.....	.....	.....	45	.....	.....	12	Not stated	.....
3	25	52	.....	.....	.....	56	450,000	250,000	60	18,000,000	9,000,000	400	Inc. 15 per ct.	.....
4	13	30	20,000	30,000	10,000	13	200,000	10,000	60	3,150,000	3,150,000	300	Decrease	Wheat proportionately higher than flour
5	.....	.....	20,000	5,000	500	8	5,000	none	65	.....	10,000	60	None	.....

Value of flour produced by three concerns, \$410,800.80; Value of feed produced by three concerns, \$64,221.00; Total, \$475,000.00

Organized Labor And Its Conditions.

Since issuing the sixth annual report of this bureau, organized labor in the state has not experienced any reverses, nor has it had any conflicts of particular moment, but it has secured, through concerted action, some changes in previous conditions that will prove of inestimable benefit to large number's of its members. One of these conditions is the adoption as an established custom of 6 o'clock closing for mercantile establishments. The rule had been previously adopted in several of the smaller towns of the state, but is now in force as well in Butte, Great Falls and Helena. As a direct result of the organized effort, all of the mercantile forces now have their evenings for rest and recreation, and both the clerical forces and the owners of the mercantile establishments are experiencing and acknowledging the appreciated benefits.

Another step was made in the right direction, and one that will prove the initial effort to a successful conclusion, when Mr. F. Augustus Heinze, for the Montana Ore Purchasing Company, and Senator W. A. Clark, for his properties and industries at Butte, granted their laborers an eight-hour day. During the campaign of the past fall the subject was agitated, and as a result the platform of the Fusion forces—Populists, Democrats and Labor Party—pledged themselves, in case of their election, to secure the enactment of an eight-hour law for all miners and smeltermen, and as these forces were victorious by a very decided majority, and have an equally pronounced majority in the assembly, there could be no doubt that the eight-hour law would be placed upon the state statutes. These forces, according to promise, have at the moment of going to press enacted their pledges into law.

The eight-hour laws that have been enacted by a number of states may be shortly stated, as follows:

California.—Eight hours of labor constitutes a day's work, unless it is otherwise expressly stipulated by the parties to a contract. A stipulation that eight hours labor constitutes a day's work must be made a part of all contracts to which the state or any municipal corporation therein is a party. But in the case of drivers, conductors and gripmen of street-cars for the carriage of passengers, a day's work consists of twelve hours. Employment of minor children for more than eight hours per day is absolutely prohibited, except in vinicultural or horticultural pursuits, or in domestic or household occupations.

Colorado.—Eight hours constitutes a day's work for all workmen employed by the state, or any county, township, school district, municipality or incorporated town.

Connecticut.—Eight hours of labor constitute a legal day's work, unless otherwise agreed.

District of Columbia.—Eight hours constitute a day's work for all laborers or mechanics employed by or on behalf of the District of Columbia.

Idaho.—Eight hours' actual work constitute a lawful day's work on all state and municipal works.

Illinois.—Eight hours constitute a legal day's work in all mechanical employments, except on farms, and when otherwise agreed; does not apply to service by the day, week or month, or prevent contracts for longer hours.

Indiana.—Eight hours of labor constitute a legal day's work for all classes of mechanics, workingmen and laborers, excepting those engaged in agricultural and domestic labor. Overwork by agreement and for extra compensation is permitted. The employment of persons under fourteen years of age for more than eight hours per day is absolutely prohibited.

Kansas.—Eight hours constitute a day's work for all laborers, mechanics, or other persons employed by or on behalf of the state, or any county, city, township, or other municipality.

Nebraska.—Eight hours constitute a legal day's work for all classes of mechanics, servants and laborers, except those engaged in farm or domestic labor.

Missouri.—Eight hours constitute a legal day's work. The law does not prevent an agreement to work for a longer or a shorter time, and does not apply to laborers and farm hands in the service of farmers, or others engaged in agriculture.

Montana.—Eight hours constitute a legal day's work for persons engaged to operate or handle any first-motion or direct-acting hoisting machine, or any geared or indirect-acting hoisting engine at any mine employing fifteen or more men underground when the duties of fireman are performed by the person so engaged; also for any stationary engineer, operating a stationary engine developing fifty or more horse-power when such engineer has charge or control of a boiler or boilers in addition to his other duties. The law applies only to such steam plants as are in continuous operation, or are operated twenty or more hours in each twenty-four hours, and does not apply to any persons running any engine more than eight hours in each twenty-four for the purpose of relieving another employe in case of sickness or other unforeseen cause. Also, since the recent enactment, underground miners and smeltermen are restricted to eight hours.

New Jersey.—Eight hours constitutes a day's labor on any day whereon any general or municipal election shall be held.

New York.—Eight hours constitute a day's work for mechanics, working men and laborers, except in farm or domestic labor, but overwork for extra pay is permitted. The law applies to those employed by the state or municipality, or by persons contracting for state work.

Ohio.—Eight hours shall constitute a day's work in all engagements to labor in any mechanical, manufacturing or mining business, unless otherwise expressly stipulated in the contract. But in case of conductors, engineers, firemen or trainmen of railroads, a day's work consists of ten hours.

Pennsylvania.—Eight hours shall be deemed and held to be a legal day's work in all cases of labor and service by the day where there is no agreement or contract to the contrary. This does not apply to farm or agricultural labor by the year, month or week, to labor in factories, laundries and renovating establishments, or to labor on street railways.

Eight hours out of the twenty-four shall make and constitute a day's labor in penitentiaries and reformatory institutions receiving support from the state, also for all mechanics, workmen and laborers in the employ of the state, or of any municipal corporation therein, or otherwise engaged on public works; this shall be deemed to apply to mechanics, workingmen or laborers in the employ of persons contracting with the state, or any municipal corporation therein, for the performance of public work.

Utah.—Eight hours constitutes a day's work upon all public works and in all underground mines or workings, smelters, and all other institutions for the reduction or refining of ores.

Wisconsin.—In all engagements to labor in any manufacturing or mechanical business, where there is no express contract to the contrary, a day's work shall consist of eight hours; but the law does not apply to contracts for labor by the week, month or year. In all manufactories, workshops or other places used for mechanical or manufacturing purposes, the time of labor of children under the age of eighteen, and of women employed therein, shall not exceed eight hours in the day.

Wyoming.—Eight hours' actual work constitute a legal day's work in all mines and public works.

United States.—Eight hours shall constitute a day's work for all laborers, workmen and mechanics who may be employed by or on behalf of the United States.

The states having laws prohibiting boycotting in terms are Colorado, Illinois and Wisconsin.

The states having laws prohibiting blacklisting in terms are Alabama, Colorado, Connecticut, Florida, Georgia, Illinois, Iowa, Kansas, Minnesota, Missouri, Montana, Nevada, North Dakota, Oklahoma, Utah, Virginia and Wisconsin.

The following states have laws which may fairly be construed as prohibiting boycotting: Alabama, Connecticut, Florida, Georgia, Maine, Massachusetts, Michigan, Minnesota, Mississippi, Missouri, New Hampshire, New York, North Dakota, Oklahoma, Oregon, South Dakota, Texas, Utah, Vermont and Wisconsin.

The following states have laws which may be fairly construed as prohibiting blacklisting: Georgia, Michigan, New Hampshire, New York, Oklahoma, Oregon, Rhode Island and South Dakota.

In the following states it is unlawful for an employer to exact an agreement, either written or verbal, from an employe not to join or become a member of any labor organization, as a condition of employment: California, Colorado, Idaho, Indiana, Massachusetts, Minnesota, Missouri, New Jersey, New York, Ohio and Pennsylvania.

Many of the other nations of the world have adopted laws that are much

more pronounced in favor of those who produce the wealth of the world than have any of the states of this Union. But the laws of New Zealand are the most radically in the laborer's favor. There those who labor are given the first governmental consideration, and the dollar is relegated to second instead of first place; human rights are considered first, and property rights second. The result is, that while there are no special monopoly privileges given, and as a consequence no great corporate fortunes are accumulated in short periods by making the public pay to the corporation owners "all the traffic will stand," there are no tramps within the boundaries of New Zealand, and there is no poverty. To see that all those who are willing to labor are provided work, the government sustains a labor intelligence bureau that has two hundred agents, who keep fully informed of all the labor vacancies, and provide those who offer employment with those who are seeking work. Internal improvements are accomplished under the direction of the government and labor unions, and when there is a surplus of labor on the market it is quickly absorbed by the inauguration of needed public improvements, and in this way, while the public contributes to the support of the government, and pays for the improvements that are made, receiving in return the benefits therefrom, those in need of work are given prompt and well-paid employment, and the money is again circulated through the wisely applied energy and labor of its people. The profit-sharing system has been employed in many of the channels of labor, and has wrought a great improvement in all those who engage in it. The familiar argument that corruption will permeate the government when it engages in the operation of natural monopolies, and the establishment of its internal improvements by day labor instead of through the medium of the contractor, has proved to be a falsity, so far as New Zealand is concerned, and the result would be the same with other nations. As an experiment, and for the purpose of having a direct opportunity to offer employment to the unemployed, the government engaged in farming an extensive tract of land, investing some \$55,000 it to start with, and after five years of experiment, finds that it has been a financial, as well as a social, success. The government reserves the public agricultural and pastoral lands for location by actual settlers, allowing these to locate them under a 999-year lease that requires occupation and cultivation, and it extends aid to the settler in the form of small cash loans that carry 5 per cent. interest, the principal being made payable in five years. This has also proved an entire success, and instead of being a burden to the government, is becoming a source of great revenue. City lots are also held by the government, and are located under similar conditions, except, of course, that instead of cultivation, buildings for actual occupancy must be erected. The government owns the railways, and operates them, and while the country as yet does not afford them anything like the volume of traffic secured by the railways of this country, with 22,000 miles in operation, the wages paid to the employees who operate the lines are about 30 per cent. higher than they are here, where we boast of high prices, and it may be mentioned here that these employees serve but eight hours for a day. The railway fare for first-class service is 3 cents per mile for the shortest distances, and this rate is much lower for long distances. Employees on public

works are given a 25 per cent. reduction on regular passenger rates. The government owns and operates the telegraph, telephone and express lines, and provides the service of these necessities to the people at a cost that is merely nominal as compared with the charges levied by similar corporations in this country, and at the same time each of these institutions produce a handsome net profit for the government. The cost of transmitting a message by wire is, as a sample, 12 cents for a thousand miles, and as a consequence, the per capita number of messages sent by the people of New Zealand is about four times greater than in this country, where intelligence is so general, and demands such immediate and speedy transmittal. To stimulate horticultural pursuits, a box of apples weighing 56 pounds is transported by express 300 miles for 12 cents, and the boxes are returned to the owner without further charge. Larger shipments are taken at a reduced rate. Operating under these conditions, where the laborer is paid the highest wages for his services and given the shortest day's work, and giving the public the most for its money, and in a sparsely settled and undeveloped country, yielding as yet the minimum of traffic—conditions that have brought bankruptcy to many corporation lines of this country—New Zealand last year received a net profit from its railways of \$2,250,000.

The government operates a postal savings bank system where deposits from the smallest sum to \$2,500 may be made, and the deposits of these institutions last year amounted to \$45 for every man, woman and child in the country. The public schools rank with the best in the world, and the attendance of children between the ages of seven and fourteen is compulsory. Child labor is prohibited. There are 16,000 public schools, and for all children living at a distance, transportation to and from the daily sessions is free. There is no discrimination as to sex in the political affairs of the country, but a person's name is stricken from the poll list on failure to vote, unless a competent excuse is given. Persons over 65 years of age are pensioned. The land and tax laws of the country are formulated with the same regard for the best interests of the greatest number, instead of for the singular interest of invested dollars. Taxes are levied on a sliding scale that moves steadily up as an individual or corporation increases the assessible holdings, so that instead of those who are the least able being made to bear the burden of supporting the government, as in this country, those who are the most able to pay, and who receive a proportionately greater benefit from the government, are made to assume their just proportion of the burden. The government also conducts a life insurance department, and gives the safest insurance at a fraction of the premiums that are levied here. When the change was made a few years ago from the old—our present system—to the new, the government was in debt a quarter billion dollars, and this has been reduced to thirty-five million dollars, and in several years will be wiped out entirely, as the people there have declared that they cannot appreciate that a national debt is a national blessing, when they are forced to pay a heavy interest on the "blessing."

And one of the most beneficent results of governmental ownership and operation of all public utilities and natural monopolies, and the placing of

human rights above property rights, while recognizing fully every just right of the latter, as experienced in New Zealand, has been the elimination of corporate and corrupt influences from the dictation of civic affairs, and the securing of prompt official attention to the voice of the people.

There are but few contests in New Zealand between labor and capital, but when one does occur it is adjudicated under the most comprehensive and competent arbitration laws that mete out exact justice to both disputants, and at the same time reduce the usual loss of such conflicts to a minimum by quickly and authoritatively settling the existing differences.

It is not the intention here to expound the laws or the political or civic policies or institutions of New Zealand, but to merely direct the attention of the organized labor of this state to some of the beneficial achievements that have been secured through the ballot by the intelligent action of a united people who have freed themselves from the traditions and prejudices of the past by acting on the conclusion that if they must bear the burden of supporting a government, they are, each and all of them entitled to receive the accruing benefits, and that they would have, in fact, as well as in theory, a government not only by the people, but truly for the people.

The labor unions of Montana are now in especially strong and prosperous condition, as is indicated by reports of the organizations that appear on following pages. The membership of the several organizations is conservatively placed at twenty thousand, and but a small portion of this membership is idle.

The extent to which the railway companies of the state are employing Japanese has become suddenly alarming, as it gives promise of eventually filling the state with this kind of cheap labor. The direct employment of the Japs by the companies displaces a proportionate number of white laborers, and is detrimental to the best interests of the community in this respect; but the evil will not stop here. When these Oriental employes are discharged, they remain here and become permanent competitors in the field of local labor. If the railway companies continue importing them into the state, it will be but a few years until there will be thousands of Japanese laborers in the state entering into direct competition with our white labor, offering to work for less than a dollar a day in the same field the white laborer demands \$2.50 as a minimum wage, and the evil that will result to the laborer, and to the merchant who receives his profits from the sales he makes to the better-paid white labor, is too apparent to require elaboration.

In an investigation made during the past fall of the number of Japanese employed, 1,968 were found in the service of three railway companies. Of this number the Great Northern employs 1,265, the Northern Pacific 568, and the Oregon Short Line 135. There are no Japs employed by the Great Falls & Canada or the Butte, Anaconda & Pacific. If the investigation had been made six weeks earlier, before the Great Northern and the Northern Pacific discontinued the extensive road-bed improvements that had been in progress during the summer, the work having been suspended on account of the shortage of the wheat crops of Minnesota and North Dakota, fully double the number of Japs would have been engaged along these lines.

The Japs now in the employment of these lines are principally worked on

the sections and on extra gangs doing special road-bed improvement, and on the Great Northern there are a good many employed as wipers in the round-houses.

The railways do not employ the Japs directly, but engage them from Japanese labor contractors, who draw the pay for all the men they have employed by the corporation, and they pay the men direct, and also supply them from a Japanese supply depot located without the state, the railways transporting these supplies free of charge from the supply point, as far east as St. Cloud, Minnesota. C. T. Takashi contracts the greater number of these laborers drawing \$1.15 for the regular employes, and \$1.25 for those engaged on extra gangs, and the laborers receive from the employer from \$1.05 to \$1.15 per day, less the cost of the supplies that have been furnished them, and less 10 per cent. that is paid to the padrone. Working on this basis, the Jap laborer receives between fifteen and twenty dollars per month, clear, for his work. As these laborers are provided with all necessary supplies by the man who sells their labor, they do not yield any support or patronage to the country in which they work except in instances where they run out of supplies, and are forced to procure from the local merchants a temporary supply. They of course, do not yield anything in the line of public revenues, although their presence has been the cause of considerable public expenditure in several instances during the summer.

While engaged at work on the railways the Japanese live in tents, the rudest board shanties and boarding cars—the latter being exceptional—and they board themselves and provide their own limited culinary outfit.

There are few among these foreign laborers who can speak our language, and as a consequence there are many disagreements and misunderstandings between the gangs and their respective white bosses. To adjust these differences, the contractor sends out Japs who can speak English to visit places where differences have been reported, and if an amicable settlement cannot be secured through his mediations, the disgruntled crew is replaced with a new set of Japs. One of the disadvantages of the situation, from the standpoint of the boss, is that he is not allowed to discharge any of the men, but must make a report of any difficulty that arises and await the adjudication through the company and the contractor and the English-speaking mediator. In these cases the boss is often found, or decided to be, at fault, and as a consequence, loses his position, while the disagreeing Jap holds the fort. This fact has materially lessened the reports that are being sent into headquarters by the bosses, they preferring to tell the Jap gang what to do and let them do as they please, to attempting to enforce their orders or drive the work, and lose their positions for their pains. The Japs are hard to handle, as they will sulk if asked to hurry, and when they take a fit of this character are liable to remain in their bunks the next day, and no amount of persuasion or bluffing will get them out to work, and if any form of coercion is attempted, they do not hesitate to assault the foreman, in several instances having inflicted serious injury and in others having failed to do so only because the boss has beaten a hasty retreat.

When working near the towns the Japs are inclined to patronize the

saloons in a limited way, but as the average habitue of these resorts is not any too particular as to the quality of courtesy he extends to the Oriental patron, the advances of civilization made in this direction have not been marked, nor has this branch of industry received any considerable portion of the Jap's hard-earned pittance.

At several points in the state railway companies have found it politic to defer to public opinion, and have withdrawn the Japanese laborers.

It was the evident intention of the Great Northern, originally, to employ Japanese exclusively in all branches of its extended service, but their inability to understand directions given in English, the fact that they are physically unable to perform the work of some of the heavier lines, and that in places where skill was required in the exact and intelligent performance of every duty, the foremen refused to accept their assistance, has disarranged the plan, and temporarily at least, their employment is confined to the lines mentioned. The Great Northern is the only line that is employing Japs in the round-houses.

There is no doubt, however, that the railways intend to force the Japs into every position as rapidly as they can be fitted to perform the required duties, and as rapidly as this plan is accomplished, white labor will be displaced.

The employment of Japanese by these public carriers is a subject that merits the serious attention of every citizen of the state, as every public and private interest must suffer just in proportion to the number of places they usurp.

THE STRIKE AT RED LODGE.

The following report of the strike at Red Lodge last spring is made to the bureau by Mr. Reece Davis: "I will submit a report, and in doing so, will try to give justice to all parties concerned. One year ago last September a change took place in the management of the Rocky Fork mine. The new superintendent, Mr. Franklin, of Pennsylvania, one of those theory miners without practice, undertook to change the system of working the mines from pick work to machine work, and all men were paid days' wages for the same. Under the old system all men received 75 cents per ton in the No. 4 vein, and 90 cents in the No. 6 vein, and were doing very well. Now, Mr. Franklin, under his system of machine mining, pays all machine men \$3.25 per day and loaders the same; and the output decreased in place of increased till the amount of coal dropped from 1,000 tons to about 600 tons per day. Now, Mr. Franklin claimed the machines were a success, and it was known to every practical miner in Red Lodge that they were a complete failure. On the 28th day of last February Mr. Franklin, the superintendent, in the night, posted up a notice that a new schedule would go into effect on the 15th of March, which meant a reduction of about one-half in the wages of the men.

"Now, never in the history of the west has a body of laborers been asked to submit to such a reduction when the necessities of life have been contin-

ually advancing in price. Under the old system, men working in rooms received 75 cents per ton for blasting coal off the solid. They timbered their own rooms, furnished their own powder and all other supplies. For eighteen months they had been experimenting with mining machinery, and failed to make it a success. The time for experimenting had expired, and in order that the machines may stay, the men must submit to a sweeping reduction in wages to the starvation point.

"On the 15th of March, when the new schedule was to take effect, not a man went to work. The strike was on, and as soon as the news reached the New York office of the Rocky Fork Coal Company the majority of the stockholders offered to sell out their stock to the minority stockholders, an offer they gladly accepted. The mine is now owned by the Northern Pacific Railway Company, and Mr. Busch, of Rossland, Washington, was elected vice president, and Mr. Robert Pettigrew, of the same place, was chosen as superintendent. Both these men are practical miners, and have returned to the old system, and old prices of working, and in several cases the wages have been advanced.

"When they were ready to start to work on the mines again they notified the Union. A special meeting was called, at which Mr. Busch, Mr. P. Pettigrew and Mr. P. O'Shea appeared in person, and submitted the schedule, which was accepted, and work resumed on the 20th day of April, under a schedule and rules satisfactory to all.

"No more machine men need apply in this camp for employment. From all appearances we have a bright future before us, and it is thought five or six hundred men will soon be at work here.

"Red Lodge, Montana, May 15th, 1900."

THE LABORER AND THE MINES.

The thousands who work in the mines of the state have been afforded added protection under the new enactments of the last Assembly. Mr. John Byrne, State Mine Inspector, in his current report says that the law providing for the equipment of hoisting cages with doors or gates to be closed when men are being lowered into or hoisted out of the mines, the validity of which was contested in the courts by the Anaconda Copper Mining Company, was sustained by the Supreme Court of the State in a decision handed down on January 29th. Immediately following all shafts coming within the provision of this law were equipped in accordance with it. I surmise that there are yet a few mine officials who are not disposed to view the device contemplated by this statute as one which provides effectually against that character of accidents it is designed to prevent. This idea regarding the efficiency of the contrivance is doubtless due to opinions formed long before it was given a trial, and the hostility manifested against its adoption resulted more from an anticipated inconvenience than from a well-founded objection to its pretensions as a life-saving measure. Now that the law is in force, all prejudice against it should cease, and no effort should be spared to extract from it what-

ever of good it may contain by strictly complying with its purpose. Otherwise, the bias of a mine officer may tend to deprive the employes of the protection it affords them by showing a careless or indifferent spirit towards it. I do not now, nor do I expect to find such a disposition in men having charge of property that is affected by this act who are governed by the best interests of the owners because, next to the miners, the owners are most interested in its observance by reason of the possible liability for damages in case of accident to employes while riding through shafts. The Supreme Court has sustained the law.

During the year 47 fatal accidents occurred, 40 of which were in the metal mines and seven in the coal mines. Investigation into the various causes from which these deaths resulted shows that at least half of them could have been avoided by the exercise of ordinary prudence on the part of the deceased. A fair proportion of the others were no doubt unavoidable. To the indifferent methods and contempt of an organized and regulated system on the part of some managements may justly be attributed the remainder of the fatalities. As a matter of fact, all our large mines are provided quite generously with the means necessary to make safe conditions and provide against accident, but of what use are they unless their use is systematically insisted on by those in authority. For instance, after a fall of rock has occurred in a stope or drift, killing or injuring one or more of the miners, the place is visited by the superintendent or foreman, who makes a thorough examination of the conditions, and in the great majority of instances, will order the place permanently timbered, if sufficient ground is out to allow of it being done; and if not, then order that timbers of a temporary character be set up until room is made for the permanent sets. Now, it often happens that some one of the mine officials has passed through that place a short time prior to the accident, and after a superficial examination, went on his way oblivious to pending danger, and is greatly astonished when he learns of what has occurred, the thought never presenting itself that he is in any way responsible; and even after the scene of disaster has been visited by the higher officials and orders issued then which, if given in the first place, would have saved a life or prevented an injury. The apparent dereliction of duty passes unnoticed, they usually excusing themselves with the expression that "The men should know enough to take care of themselves." This idea is only partly right, and only so far as it is right, do I approve of it; but before adopting it as a rule of practice, I would suggest that in selecting men to conduct the affairs of our large mines only those be chosen who are capable of hiring men having such qualifications, or possessing judgment sufficient to determine within a reasonable time whether the employes have the ability to properly take care of themselves without advice or instruction from those in charge.

One of the chief causes of accidents in the large mines, and the one tending most to nullify the best intended plans of the owners for the protection of the miners, is the lack of a uniform policy of administration and diversity of purposes sought to be accomplished between the superintendent and foreman on the one hand and the shift bosses on the other. The superintendent and foreman as a rule try not to lose sight of the condition of the mine while

bending every effort to secure the best results in production; yet, the shift boss is animated solely by a desire to mine and hoist the greatest possible tonnage, regardless, to a certain extent, of the conditions as to timbering, etc., of the working places, and as a rule a rivalry exists between the bosses on respective shifts, each trying to add to his reputation by hoisting more tons than the "other fellow." The effect of such methods tend naturally to increase the hazard of the miner, and cannot even be justified as profiting the owner, because it is destructive of his best interests.

An earnest effort has been made to improve the methods of storing and thawing powder underground. Every wooden box and every apparatus constructed of wood, in which the heat was furnished by a candle, found duty as a thawing device was condemned, and an apparatus made of some metallic substance constructed to furnish the required heat by hot water contained within it, was recommended. Of the sixteen fatal accidents resulting from explosions, none is chargeable to explosions from magazines or thawing devices. The following summary shows the cause of accidents:

Explosion of blasting compounds.....	16
Falls of rock	10
Falling coal	2
By cages in shafts	6
Falling down shaft	3
Falling down upraise	1
Falling from bucket while being hoisted	2
Falling down ore chute	1
Suffocated by powder gas	3
Material falling down shaft	1
Crushed by mine car	2

Total 47

The coal mining industry of the state has developed sufficiently, both in the number of mines and the men engaged in them, to justify a larger share of attention from this department than is possible with the present force. Besides an increase in the number of mines, the workings of those that have been in operation for a number of years past, have become very extensive, several of them aggregating a length of from 20 to 30 miles in haulage roads, entries, air courses and rooms. The ventilation, so essential to the coal miner, and proper maintenance of such vast systems of workings should be given the attention by the state that their importance demands. Quarterly inspections should be made by a competent officer who would at all times effectually apply the laws and regulations governing coal mines. In order to provide this need, I urgently recommend that the present law be amended by providing two deputies for this department, one of whom shall be a qualified coal miner.

The following exhibits the number of mines inspected, the number of men employed, and the number of fatal and non-fatal accidents during the past eight years.

SEVENTH ANNUAL REPORT OF BUREAU

YEAR.	Mines In- sp ected	Men Em- ployed.	Fatal Accidents.	Non-fatal Accidents.	Total Accidents.	Number of Fatal Ac- cidents per 1,000 Men employed.
1893.....	54	5,312	29	4	33	5.45
1894.....	78	7,082	27	19	46	3.81
1895.....	88	8,758	41	18	59	4.67
1896.....	78	7,727	64	21	85	8.28
1897.....	130	9,825	52	29	81	5.29
1898.....	136	11,096	48	29	77	4.32
1899.....	165	12,316	49	22	71	3.97
1900.....	163	13,906	47	36	82	3.36

DETAILED STATEMENT OF ACCIDENTS.

Date	Name.	County.	Name of Mine.
1899			
Dec. 6.	John Kleity	Silver Bow	Diamond
16.	Thos. Martin.	Cascade	A. C. M. Co., Belt....
17.	Michael Driscoll	Silver Bow	Never Sweat
24.	Pat Joyce.....	Silver Bow	St. Lawrence
30.	Ed. Perrow	Silver Bow	Parrot
1900			
Jan. 6.	Thos. Bilbow	Silver Bow	Never Sweat
6.	Mike Piano	Silver Bow	Never Sweat
13.	Thos. Smith	Silver Bow	Mountain Con No. 1
13.	Mike Sullivan	Silver Bow	Mountain Con No. 1
14.	Fred Buslet	Silver Bow	A. C. M. Co., Belt..
14.	J. H. Maxwell	Silver Bow	Colusa-Parrot
14.	J. Milnovich	Silver Bow	Colusa-Parrot
Feb. 3.	John Brown	Madison	Clipper
3.	J. Gries	Madison	Clipper
14.	B. Wilkins	Carbon	Gebo
16.	D. H. Brooks	Carbon	Bridger
22.	Henry Jeffery	Silver Bow	Moose
23.	Milton Keller	Silver Bow	Moonlight
Mar. 24.	Jerry Murphy	Silver Bow	Parrot
Apr. 6.	James Lewis	Park	Bowash
23.	Nelson Leclair	Granite	Granite-BI-Metallie .
28.	Nelson Larson	Fergus	Iron Chancellor
May 13.	Ole Mohltad	Lewis and Clarke	Bald Mountain
June 10.	Ed Fogarty	Silver Bow	Never Sweat
11.	Ed Cavanaugh	Silver Bow	Mountain Con. No. 1
14.	P. C. Duncan	Silver Bow	Gagnon
27.	Ed. Young	Silver Bow	Original
July 19.	M. L. Dunlevy	Silver Bow	Anaconda
24.	Thos. Cashion	Silver Bow	High Ore
Aug. 3.	Thomas W. Thomas	Park	Mont. Coal and Coke
4.	Pat Murphy	Silver Bow	Diamond
Sept. 14.	John Kelly	Silver Bow	Stewart
14.	J. J. Murray	Silver Bow	Stewart
25.	O. Anderson	Gallatin	Mountain Side
28.	J. W. Slater	Jefferson	Eva May
Oct. 1.	Ber. McDonald	Silver Bow	Smokehouse
11.	B. L. Fuller	Silver Bow	Old Joe
13.	James Gayler	Madison	Kennet
14.	Dan Buckley	Silver Bow	Diamond
29.	J. T. Drummey	Silver Bow	Rose
29.	W. C. Whitmore	Silver Bow	Smokehouse
29.	Chas. Blackie	Silver Bow	Smokehouse
29.	Robt. Campbell	Silver Bow	Smokehouse
29.	Thos. Glendenon	Lewis and Clarke	Lucky Joe.....
30.	Guissippe Morello	Silver Bow	B. & M. Shaft No. 6
Nov. 3.	Joseph Delhanty	Cascade	Cottonwood Coal Co.
18.	John Eagan.....	Madison	Strawberry

State Bureaus of Agriculture, Labor and Industry.

United States Department of Labor, established 1884, Commissioner, Carroll D. Wright, Washington, D. C.

California.—Bureau of Labor Statistics, established 1883, Commissioner, John S. Enos, San Francisco.

Colorado.—Bureau of Labor Statistics, established 1887, Commissioner, C. J. Driscoll, Denver.

Connecticut.—Bureau of Labor Statistics, established 1873, Commissioner, Samuel J. Starr, Hartford.

Idaho.—Bureau of Agriculture and Industrial Statistics, established 1895, Commissioner, J. A. Czizek, Boise City.

Illinois.—Bureau of Labor Statistics, established 1879, Commissioner, F. H. B. McDowell, Springfield.

Indiana.—Bureau of Statistics, established 1897, Commissioner, John Collett, Indianapolis.

Iowa.—Bureau of Labor and Industrial Statistics, established 1884, Commissioner, E. R. Hutchins, Des Moines.

Kansas.—Bureau of Labor and Agricultural Statistics, established 1885, Commissioner, Frank H. Betton, Topeka.

Kentucky.—Bureau of Agriculture, Labor and Statistics, established 1876, Commissioner, Lucas Moore, Frankfort.

Louisiana.—Bureau of Statistics of Labor, established 1900, Commissioner, Thomas Harrison.

Maine.—Bureau of Agricultural and Industrial Statistics, established 1887, Commissioner, Samuel W. Mathews, Augusta.

Montana.—Bureau of Agriculture, Labor and Industry, established 1893, Commissioner, J. H. Calderhead, Helena.

Maryland.—Bureau of Industrial Statistics, established 1884, Commissioner, Thomas A. Smith, Baltimore.

Massachusetts.—Bureau of Statistics of Labor, established 1869, Commissioner, Horace G. Wadlin, Boston.

Michigan.—Bureau of Labor and Industrial Statistics, established 1883, Commissioner, Joseph L. Cox, Lansing.

Minnesota.—Bureau of Labor, established 1887, Commissioner, Martin F. McHale, St. Paul.

Missouri.—Bureau of Labor Statistics and Inspection, established 1879, Commissioner, Thomas P. Rixey, Jefferson City.

Nebraska.—Bureau of Labor and Industrial Statistics, established 1887, Commissioner, John Jenkins, Lincoln.

New Jersey.—Bureau of Statistics, Labor and Industries, established 1878, Commissioner, William Stainsby, Trenton.

New Hampshire.—Bureau of Labor, established 1893, Commissioner, Lysander H. Carroll, Concord.

New York.—Bureau of Labor Statistics, established 1883, Commissioner, John McMakin, Albany.

North Carolina.—Bureau of Labor Statistics, established 1887, Commissioner, B. R. Lacy, Raleigh.

North Dakota.—Department of Agriculture and Labor, established 1889, Commissioner, H. U. Thomas, Bismarck.

Ohio.—Bureau of Labor Statistics, established 1877, Commissioner, M. D. Ratchford, Columbus.

Pennsylvania.—Bureau of Industrial Statistics, established 1872, Commissioner, James M. Clark, Harrisburg.

Rhode Island.—Bureau of Industrial Statistics, established 1887, Commissioner, Henry E. Tiepke, Providence.

Tennessee.—Bureau of Labor Statistics and Mines, established 1891, Commissioner, R. A. Shifflet, Nashville.

Virginia.—Bureau of Industrial Statistics, established 1898, Commissioner, James B. Doherty, Richmond.

Washington.—Bureau of Labor, established 1897, Commissioner, W. C. P. Adams, Olympia.

Wisconsin.—Bureau of Labor Statistics, established 1883, Commissioner, Halford Erickson, Madison.

West Virginia.—Bureau of Labor, established 1889, Commissioner, I. V. Barton, Wheeling.

During the past two years there have been a number of bureaus established in foreign countries that will be devoted to industrial, agricultural and labor statistics and interests.

DIRECTORY OF LABOR ORGANIZATIONS IN MONTANA JUNE 30, 1900.

NAME OF ORGANIZATION.	Towns or City.	County.	Date of Organization.	Elect Officers.	Date of Meetings.	VOLUNTARY AND STIPULATED RESERVES.			At Death or from Total Disability.
						For sickness or disability		For Funeral Expenses.	
						Amount Paid per week.	For How Many Weeks.		
				Are Benefits Stipulated.	Are Benefits Voluntary.	From	To		
Western Federation of Miners.	Butte.	Silver Bow.	May 19, 1891.	May each year.	1st Monday in May	Yes	Yes	\$100	
Admiral's Miners Union No. 57.	Aldridge.	Park.	April 19, 1897.	1st of Sat., Jan. & July	Saturday evenings.	Yes	Yes	50	
Basin Miners Union No. 3.	Basin.	Jefferson.	May 19, 1897.	1st of Mar., & Sept.	1st & 3d Wed. in mo.	Yes	Yes	50	
Butte Miners Union No. 1.	Butte.	Silver Bow.	June 13, 1897.	March and Sept.	Tuesday evenings.	Yes	Yes	50	
Carbonado Miners Union No. 67.	Carbonado.	Carbon.	Oct. 6, 1897.	March and Sept.	Tuesday evenings.	Yes	Yes	50	
Gabo Miners Union No. 73.	Gabo.	Granite.	Sept. 24, 1898.	1st Tu., Mar., & Sep.	Monday evenings.	Yes	Yes	50	
Granite Miners Union No. 4.	Granite.	Granite.	May 6, 1900.	1st Tu., Mar., & Sep.	Monday evenings.	Yes	Yes	50	
Haas Miners Union No. 35.	Haas.	Minerwater.	June 25, 1900.	March and Sept.	Monday evenings.	Yes	Yes	50	
Marion Miners Union No. 1.	Marion.	Minerwater.	June 25, 1900.	March and Sept.	Monday evenings.	Yes	Yes	50	
Red Mountain Miners Union No. 7.	Red Mt.	Nearhart.	May 10, 1902.	March and Sept.	Saturday evenings.	Yes	Yes	50	
Red Lodge Miners Union No. 29.	Red Lodge.	Cascade.	Jan. 3, 1903.	March and Sept.	Saturday evenings.	Yes	Yes	50	
Winston Miners Union No. 45.	Winston.	Broadwater.	Jan. 3, 1903.	March and Sept.	Saturday evenings.	Yes	Yes	50	
Mill and Smelters Union No. 74 W. F. Miners	Butte.	Silver Bow.	July 18, 1904.	1st Wed., M'n & Sep.	Saturday evenings.	Yes	Yes	50	
Mill and Smelters Union No. 16 W. F. Miners	Great Falls.	Cascade.	Sept. 2, 1904.	March and Sept.	Saturday evenings.	Yes	Yes	50	
Order of Railway Conductors:									
Yellowstone Division No. 19.	Glenview.	Dawson.	March 11, 1898.	1st Wed. in Dec.	1st & 4th Wed. in mo.	Yes	Yes	5000	
Yellowstone Division No. 36.	Great Falls.	Cascade.	Aug. 19, 1894.	Dec. each year.	1st & 4th Sun. in mo.	Yes	Yes	1000	
Montana Division No. 35.	Hayden.	Cascade.	Jan. 21, 1895.	Dec. each year.	1st & 4th Sun. in mo.	Yes	Yes	5000	
Livingston Division No. 27.	Livingston.	Park.	March 17, 1895.	1st meeting in Dec.	1st & 3d Sun. in mo.	Yes	Yes	3000	
Mission Division No. 43.	Mission.	Missoula.	Oct. 15, 1891.	1st meeting in Dec.	1st & 3d Sun. in mo.	Yes	Yes	1000	
Butte City Division No. 29.	South Butte.	Silver Bow.	Oct. 15, 1891.	1st meeting in Dec.	1st & 4th Sun. in mo.	Yes	Yes	1000	
Brotherhood of Locomotive Engineers:									
Division No. 74.	Butte.	Silver Bow.	June 1, 1896.	1st of June	1st & 4th Sat. in mo.	Yes	Yes	500	
Division No. 95.	Butte.	Butte.	Sept. 24, 1900.	March 3.	Wed. afternoons.	Yes	Yes	750	
Division No. 96.	Great Falls.	Cascade.	Sept. 24, 1900.	April 1.	Wed. afternoons.	Yes	Yes	750	
Division No. 99.	Kalispell.	Flathead.	1900.	April 1.	Wed. afternoons.	Yes	Yes	750	
Brotherhood of Locomotive Firemen:									
Copper City Lodge No. 50.	Anaconda.	Deer Lodge.	Nov. 30, 1896.	1st Wed. in June.	1st & 4th Wed. in mo.	Yes	Yes	100	
Silver State Lodge No. 57.	Clancy.	Jefferson.	Nov. 30, 1896.	Last meet'g in June	Sun. afternoons.	Yes	Yes	100	
Landmark Lodge No. 126.	Glasgow.	Valley.	Nov. 30, 1896.	Last meet'g in June	Sun. afternoons.	Yes	Yes	100	
Min River Lodge No. 49.	Glenview.	Dawson.	Nov. 30, 1896.	Last meet'g in June	Sun. afternoons.	Yes	Yes	100	
Min River Lodge No. 51.	Helena.	Flathead.	Nov. 30, 1896.	Last meet'g in June	Sun. afternoons.	Yes	Yes	100	
Min River Lodge No. 52.	Helena.	Flathead.	Nov. 30, 1896.	Last meet'g in June	Sun. afternoons.	Yes	Yes	100	
Custer Lodge No. 191.	Kalispell.	Flathead.	Dec. 20, 1893.	On or before June 30	1st & 3d Fri. in mo.	Yes	Yes	100	
Lima Lodge No. 94.	Lima.	Benverhead.	Dec. 9, 1896.	Last meet'g in June	1st & 3d Mon. in mo.	Yes	Yes	100	
J. K. Oulbreath Lodge No. 264.	Missoula.	Missoula.	April 5, 1895.	1st meeting in June.	1st & 3d Wed. in mo.	Yes	Yes	100	
Brotherhood of Railway Trainmen:									
Engle Butte Lodge No. 38.	Perth.	Custer.	May 1, 1893.	1st meeting in Dec.	Thursdays.	Yes	Yes	100	
San River Lodge No. 43.	Great Falls.	Cascade.	May 1, 1893.	1st meeting in Dec.	Sunday evenings.	Yes	Yes	100	

† Optional.

DIRECTORY OF LABOR ORGANIZATIONS IN MONTANA—CONTINUED,

NAME OF ORGANIZATION.	Town or City.	County.	Date of Organization.	Elect Officers	Date of Meetings.	VOLUNTARY AND STIPULATED BENEFITS.					
						Are Benefits Voluntary.	Are Benefits Stipulated.	For sick or disability		For Funeral Expenses.	At Death or from Total Disability.
								Amount Paid per week.	For How Many Weeks.		
Kalispell Lodge No. 314.....	Kalispell.....	Flathead.....	Jan. 25, 1897.....	4d Sunday in Dec.,	1st & 3d Sun. ea. mo.	.....	Yes	.....	.....	.....	.....
National Park Lodge No. 294.....	Livingston.....	Park.....	.....	1st meeting in Dec.,	1st & 3d Thur. ea. mo.	.....	Yes	.....	.....	.....	.....
T. J. Shahan Lodge No. 293.....	Missoula.....	Missoula.....	.....	Dec. 2, biennially.....	.....	.....	Yes	.....	.....	\$100	400 1200
International Switchmen's Union:			.....	.....	.....	.....	.....	.....	.....	.....	.....
Cooper City Lodge No. 48.....	South Butte.....	Silver Bow.....	April 15, 1900.....	Quarterly.....	1st & 3d Sun. ea. mo.	.....	Yes	.....	.....	.....	.....
International Brotherhood of Electrical Workers:			.....	.....	.....	.....	.....	.....	.....	.....	.....
Inter'l Brotherhood Electrical Workers No. 65.....	Butte.....	Silver Bow.....	Nov. 25, 1895.....	1st Tu. June & Dec.,	1st & 3d Sun. ea. mo.	.....	Yes	.....	.....	.....	.....
Inter'l Brotherhood Electrical Workers No. 122.....	Great Falls.....	Cascade.....	June 3, 1900.....	July 5.....	Every Tues. eve'g	.....	Yes	5 00	6	100	.....
Butte Stationary Engineers No. 1.....	Butte.....	Silver Bow.....	July 1, 1895.....	1st m'g M'h & Sep.	Wed. evenings.....	.....	Yes	.....	.....	75	.....
Gen. Dewey Engineers, W. F. of M. No. 86.....	Granite.....	Granite.....	Jan. 25, 1899.....	1st m'g M'h & Sep.	Every other Mon.....	.....	Yes	7 00	10	70	.....
National Ass'n of Stationary Engineers No. 2.....	Helena.....	Lewis & Clarke.....	.....	.....	.....	.....	Yes	.....	.....	.....	.....
National Ass'n of Stationary Engineers No. 4.....	Helena.....	Silver Bow.....	.....	.....	.....	.....	Yes	.....	.....	.....	.....
National Ass'n of Stationary Engineers No. 6.....	Missoula.....	Missoula.....	Sep. 25, 1895.....	December.....	Friday evenings.....	.....	Yes	.....	.....	.....	.....
Street Car Men's Union.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Street Car Men's Union of W. L. U. No. 36.....	Butte.....	Silver Bow.....	Nov. 1, 1893.....	1st Tuesday in Jan.	1st & 4th Wed. ea. mo.	.....	Yes	.....	.....	.....	.....
Machinists' Union.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
International Ass'n of Machinists No. 89.....	Butte.....	Silver Bow.....	June 9, 1899.....	Jan. 1 and July 1.....	1st & 3d Fri. ea. mo.	.....	Yes	.....	.....	.....	.....
International Ass'n of Machinists No. 106.....	Livingston.....	Park.....	.....	Jan. 1 and July 1.....	.....	.....	Yes	.....	.....	.....	.....
Typographical Union:			.....	.....	.....	.....	.....	.....	.....	.....	.....
Anaconda Typographical Union No. 253.....	Anaconda.....	Deer Lodge.....	Oct. ... 1899.....	January and July.....	1st Sunday ea. mo.	.....	Yes	.....	.....	60	.....
Butte Typographical Union No. 126.....	Butte.....	Silver Bow.....	.....	June 1 and Dec. 1.....	1st Sunday ea. mo.	.....	Yes	.....	.....	60	.....
Great Falls Typographical Union No. 295.....	Great Falls.....	Cascade.....	.....	January and July.....	1st Sunday ea. mo.	.....	Yes	.....	.....	60	.....
Helena Typographical Union No. 95.....	Helena.....	Lewis & Clarke.....	July 1, 1893.....	January and July.....	1st Sunday ea. mo.	.....	Yes	.....	.....	60	.....
Missoula Typographical Union No. 277.....	Missoula.....	Missoula.....	Dec. 25, 1899.....	January and July.....	1st Wed. eve. ea. mo.	.....	Yes	.....	.....	60	.....
Pressmen's Union.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Butte Printing Pressmen's Union No. 31.....	Butte.....	Silver Bow.....	July ... 1897.....	.....	.....	.....	Yes	.....	.....	150	.....
Helena Printing Pressmen's Union No. 9.....	Helena.....	Lewis & Clarke.....	Dec. 10, 1899.....	January and July.....	1st Tues. each mo.	.....	Yes	.....	.....	100	.....
United Brotherhood of Carpenters and Joiners of Amer. Local No. 35.....	Anaconda.....	Deer Lodge.....	May 16, 1899.....	Lat m'g Dec. & June	Every Thurs. eve'g	.....	Yes	7 00	4no 1	50	300
Local No. 35.....	Butte.....	Silver Bow.....	Dec. 25, 1894.....	June and Dec.....	Every Wed. eve'g	.....	Yes	7 00	7	300	400
Local No. 118.....	Butte.....	Silver Bow.....	.....	Dec. and June.....	Every Thurs. eve'g	.....	Yes	.....	.....	.....	.....
Local No. 343.....	Billings.....	Yellowstone.....	.....	Lat m'g June & Dec	Every Wednesday.....	.....	Yes	5 45	10	200	400
Local No. 29.....	Great Falls.....	Cascade.....	Nov. 25, 1899.....	Dec. and June.....	Friday evenings.....	.....	Yes	5 00	10	.....	400
Clear Makers' International Union:			.....	.....	.....	.....	.....	.....	.....	.....	.....
No. 273.....	Anaconda.....	Deer Lodge.....	Oct. ... 1899.....	Jan. and July.....	1st Tues. each mo.	.....	Yes	5 00	3	.....	250
No. 301.....	Butte.....	Silver Bow.....	Nov. ... 1894.....	Jan. and June.....	Monthly.....	.....	Yes	5 00	3	.....	250
No. 309.....	Great Falls.....	Cascade.....	Nov. 3, 1894.....	1st Thurs. each mo.	1st Thurs. each mo.	.....	Yes	5 00	3	.....	250
No. 378.....	Helena.....	Lewis & Clarke.....	Nov. 25, 1895.....	Jan. 1 and July 1.....	1st & 3d Mondays.....	.....	Yes	5 00	3	.....	550

§ No limit.

DIRECTORY OF LABOR ORGANIZATIONS IN MONTANA--CONTINUED.

NAME OF ORGANIZATION.				Town or City.	County.	Date of Organization.	Elect Officers.	Date of Meetings.	Are Benefits Voluntary.	Are Benefits stipulated.	For How Many Weeks.	For Funeral Expenses.	At Death or from Total Disability.	Voluntary and Stipulated Benefits.	
														From	To
														Perkennance or disability	
														Amount Paid per week.	
														Yes	
														Yes	
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All expenses.

DIRECTORY OF LAOR ORGANIZATIONS IN MONTANA—CONTINUED.

NAME OF ORGANIZATION.	Town or City.	County.	Date of Organization.	Elect Officers.	Date of Meetings.	VOLUNTARY AND STIPULATED BENEFITS.						
						Are Benefits Voluntary.	Are Benefits Stipulated.	For sickness or disability		For Funeral Expenses.	At Death or from Total Disability	
								Amount Paid per week.	For How Many Weeks.			From	To
Cooks and Waiters and Hotel Employees: Cooks and Waiters W. L. U. No. 1.....	Anaconda.....	Deer Lodge.....	1891.....	Lat mgt June & Dec July 1 and Jan. 1.....	Every Thur. eve. Monday evenings.....	Yes	Yes	7 00	4	75	100	100
Cooks and Waiters W. L. U. No. 3.....	Butte.....	Silver Bow.....	1899.....	1st Mon. Jan. & July	Monday evenings.....	Yes	Yes	7 00	4	100	100	100
Hotel and Rest. Emp. Union. No. 2, W. L. U.....	Butte.....	Deer Lodge.....	Aug. 8, 1898.....	1st mgt June & Dec 1st Thurs. each mo.	1st Thurs. each mo. 1st Thurs. each mo.	Yes	Yes	.....	.....	.....	.....	.....
Shoemakers: Shoemakers Union No. 24.....	Anaconda.....	Deer Lodge.....	1891.....	Lat mgt June & Dec 1st Thurs. each mo.	1st Thurs. each mo. 1st Thurs. each mo.	Yes	Yes	.....	.....	.....	.....	.....
Shoemakers Union No. 27, W. L. U.....	Butte.....	Silver Bow.....	1891.....	Lat mgt June & Dec 1st Thurs. each mo.	1st Thurs. each mo. 1st Thurs. each mo.	Yes	Yes	.....	.....	.....	.....	.....
Workingmen: Butte Workmen Union No. 5, W. L. U.....	Butte.....	Silver Bow.....	May 17, 1899.....	Lat mgt June & Dec 1st Thurs. each mo.	1st Thurs. each mo. 1st Thurs. each mo.	Yes	Yes	.....	.....	.....	.....	.....
Laundry Workers: Laundry Workers Union No. 4, W. L. U.....	Butte.....	Silver Bow.....	Aug. 11, 1898.....	Lat mgt June & Dec 1st Thurs. each mo.	1st Thurs. each mo. 1st Thurs. each mo.	Yes	Yes	.....	.....	.....	.....	.....
Lumbermen: Western Labor Union No. 41.....	Butte.....	Silver Bow.....	Jan. 21, 1899.....	Lat mgt June & Dec 1st Thurs. each mo.	1st Thurs. each mo. 1st Thurs. each mo.	Yes	Yes	.....	.....	.....	.....	.....
Big Blackfoot Lumber Union No. 47.....	Butte.....	Silver Bow.....	Feb. 14, 1899.....	Lat mgt June & Dec 1st Thurs. each mo.	1st Thurs. each mo. 1st Thurs. each mo.	Yes	Yes	.....	.....	.....	.....	.....
Clinton Federal Labor Union No. 48.....	Butte.....	Silver Bow.....	Feb. 11, 1899.....	Lat mgt June & Dec 1st Thurs. each mo.	1st Thurs. each mo. 1st Thurs. each mo.	Yes	Yes	.....	.....	.....	.....	.....
Flourace Lumbermen Union No. 81.....	Butte.....	Silver Bow.....	Feb. 20, 1900.....	Lat mgt June & Dec 1st Thurs. each mo.	1st Thurs. each mo. 1st Thurs. each mo.	Yes	Yes	.....	.....	.....	.....	.....
Lumbermen Union No. 91.....	Butte.....	Silver Bow.....	June 2, 1899.....	Lat mgt June & Dec 1st Thurs. each mo.	1st Thurs. each mo. 1st Thurs. each mo.	Yes	Yes	.....	.....	.....	.....	.....
Lumbermen Union No. 57.....	Butte.....	Silver Bow.....	June 2, 1899.....	Lat mgt June & Dec 1st Thurs. each mo.	1st Thurs. each mo. 1st Thurs. each mo.	Yes	Yes	.....	.....	.....	.....	.....
Lumbermen Union No. 50.....	Butte.....	Silver Bow.....	June 2, 1899.....	Lat mgt June & Dec 1st Thurs. each mo.	1st Thurs. each mo. 1st Thurs. each mo.	Yes	Yes	.....	.....	.....	.....	.....
Lumbermen Union No. 40.....	Butte.....	Silver Bow.....	June 2, 1899.....	Lat mgt June & Dec 1st Thurs. each mo.	1st Thurs. each mo. 1st Thurs. each mo.	Yes	Yes	.....	.....	.....	.....	.....
Lumbermen Union No. 69.....	Butte.....	Silver Bow.....	Sept. 16, 1899.....	Lat mgt June & Dec 1st Thurs. each mo.	1st Thurs. each mo. 1st Thurs. each mo.	Yes	Yes	.....	.....	.....	.....	.....
Western Labor Union: No. 79.....	Butte.....	Silver Bow.....	Oct. 4, 1899.....	Lat mgt June & Dec 1st Thurs. each mo.	1st Thurs. each mo. 1st Thurs. each mo.	Yes	Yes	.....	.....	.....	.....	.....
Painters and Decorators: Painters and Decorators of America No. 189.....	Butte.....	Silver Bow.....	June 1, 1898.....	Lat mgt June & Dec 1st Thurs. each mo.	1st Thurs. each mo. 1st Thurs. each mo.	Yes	Yes	.....	.....	.....	.....	.....
Painters and Decorators of America No. 212.....	Butte.....	Silver Bow.....	Aug. 23, 1898.....	Lat mgt June & Dec 1st Thurs. each mo.	1st Thurs. each mo. 1st Thurs. each mo.	Yes	Yes	.....	.....	.....	.....	.....
Painters and Decorators of America No. 260.....	Butte.....	Silver Bow.....	Jan. 5, 1899.....	Lat mgt June & Dec 1st Thurs. each mo.	1st Thurs. each mo. 1st Thurs. each mo.	Yes	Yes	.....	.....	.....	.....	.....
Blacksmiths: Butte Blacksmiths & Helpers U. No. 1 W. L. U.....	Butte.....	Silver Bow.....	Jan. 5, 1899.....	Lat mgt June & Dec 1st Thurs. each mo.	1st Thurs. each mo. 1st Thurs. each mo.	Yes	Yes	.....	.....	.....	.....	.....
Tailors: Journeyman Tailors Union No. 151.....	Anaconda.....	Deer Lodge.....	Oct. 1, 1898.....	Lat mgt June & Dec 1st Thurs. each mo.	1st Thurs. each mo. 1st Thurs. each mo.	Yes	Yes	.....	.....	.....	.....	.....
Journeyman Tailors Union No. 152.....	Butte.....	Silver Bow.....	Oct. 1, 1898.....	Lat mgt June & Dec 1st Thurs. each mo.	1st Thurs. each mo. 1st Thurs. each mo.	Yes	Yes	.....	.....	.....	.....	.....
Journeyman Tailors Union No. 153.....	Butte.....	Silver Bow.....	Sept. 10, 1899.....	Lat mgt June & Dec 1st Thurs. each mo.	1st Thurs. each mo. 1st Thurs. each mo.	Yes	Yes	.....	.....	.....	.....	.....
Journeyman Tailors Union No. 154.....	Butte.....	Silver Bow.....	June 14, 1898.....	Lat mgt June & Dec 1st Thurs. each mo.	1st Thurs. each mo. 1st Thurs. each mo.	Yes	Yes	.....	.....	.....	.....	.....
Bakers: Bakers Union No. 7.....	Butte.....	Silver Bow.....	Feb. 11, 1896.....	Lat mgt June & Dec 1st Thurs. each mo.	1st Thurs. each mo. 1st Thurs. each mo.	Yes	Yes	.....	.....	.....	.....	.....
Lathers: Co-operative & Protective Lathers Union No. 1.....	Butte.....	Silver Bow.....	April 1, 1896.....	Lat mgt June & Dec 1st Thurs. each mo.	1st Thurs. each mo. 1st Thurs. each mo.	Yes	Yes	.....	.....	.....	.....	.....
Stone Cutters: Federal Labor Union No. 43.....	Butte.....	Silver Bow.....	April 1, 1896.....	Lat mgt June & Dec 1st Thurs. each mo.	1st Thurs. each mo. 1st Thurs. each mo.	Yes	Yes	.....	.....	.....	.....	.....

* Expenses. † Optional. ‡ No limit. § All expenses.

Miscellaneous Wage Items.

Gathered From Reliable Sources and Rendered by the Employer.

Quartz Miners.—Butte, Basin, Granite, Hassel and Winston pay \$3.50 for a ten-hour day, and Garnett and Philipsburg pay \$3 for a ten-hour day. Hassel and Winston pay car men \$3 for a ten-hour day.

Coal Miners.—Aldridge pays \$2.75 for a ten-hour day, and Red Lodge pays \$3 for a ten-hour day. The mines in Cascade county, which produce a greater part of the coal product of the state, pay 90 cents and \$1 a ton, the miners receiving pay for slack when the slack is used, or where there are coke ovens.

Railway Men.—Conductors on valley grade receive \$3 per 100 miles, on mountain grade \$4 per 100 miles, and overtime at ten miles per hour. Trainmen receive \$2 per 100 miles on valley grade, \$3 on mountain grade, and overtime at ten miles per hour. Engineers receive on the Northern Pacific \$3, \$3.75, \$4 for 100 miles or 10 hours; on the Great Northern, \$4 for 100 miles or ten hours. Firemen, Clancy division, \$2.65 for 100 miles or ten hours; on this division, 48 miles is counted for 100, if made in 10 hours; if not, time is counted ten miles an hour. On the Great Falls division, firemen receive \$2.30 for 100 miles or ten hours; and South Butte, \$2.50 to \$2.75 for ten hours.

Printers.—Day foreman, \$27, night foreman, \$40 per week; compositors, \$24 and \$27; \$25 to \$35 per week.

Lumbermen.—At Bonner, not less than \$2 for ten hours' work; Nine Mile, minimum, \$35 per month and board; Missoula, \$2.50 per day.

Laundries.—Butte and other cities, men \$18 per week; women \$10 to \$15 per week.

Clerks.—Male \$80, female \$50 per month.

Barbers.—Butte and Anaconda \$18, Great Falls \$16 per week.

Carpenters.—Butte and Anaconda \$4.50 per nine-hour day; Great Falls, \$4 per nine-hour day; Missoula, \$4 per ten-hour day.

Stationary Engineers.—Butte and Missoula, \$4 per day; pumpmen, \$4 per day; firemen, \$3.50 per day.

Granite Cutters.—Helena, \$4.50 per day.

Bricklayers.—Butte, Helena, Anaconda, Great Falls, \$6 per nine-hour day; Missoula, 60 cents per hour.

Stone Masons.—Anaconda, \$6; Great Falls, \$5; Butte, \$4 per nine-hour day; Missoula, 50 cents per hour.

Plasterers.—Butte, \$4 for an eight-hour day.

Painters.—Anaconda and Butte, 45 cents per hour; Great Falls, 40 cents per hour.

Decorators.—Anaconda and Butte, 45 cents per hour; Great Falls, 50 cents per hour.

Brewers.—Butte, Great Falls and Helena, \$3.50 per day.

Tailors.—Butte, \$21 per week.

Butchers.—Butte, head shopman, \$90 per month or \$4 per day; in slaughter house, same; delivery men, \$75 per month or \$3 per day.

Blacksmiths.—\$4 to \$5 per day.

Mill and Smeltermen.—\$3 to \$4.50 per day.

Quarrymen.—\$3.50 per day of nine hours and eight hours on Saturday.

Bakers.—\$18 to \$25 per week.

The five last are Butte quotations.

COMPARATIVE AVERAGE WAGES OF EMPLOYEES OF FLOURING MILLS FOR YEARS ENDING JUNE 30, AS BELOW

Classification.	1900	1898	1897	1896	1895	1894
Bookkeepers, per month	\$36 25	\$36 25	\$36 00	\$31 00	\$30 00	\$29 00
Engineers, per month	76 44	76 44	77 40	79 00	79 30	82 42
Firemen and assistant engineers, per day	2 28	2 30			3 10	
Flour packers, per month	57 46	57 46		00 23	06 75	
Laborers, per month	55 00	55 00	55 00	52 14	57 10	55 12
Millers, head, per month	96 50	96 50	90 54	95 28	106 73	102 80
Millers, second, per month	37 18	37 18	42 22	67 85	75 75	75 95
Oilers, per day	1 96	1 96			2 50	2 00
Wheat buyers, per month	72 50	73 60	75 00	75 00	06 75	
Wheat cleaners, per day					2 21	2 25
Salesmen, per month					100 00	

..... Blank spaces—not rate given.

COMPARATIVE AVERAGE WAGES OF SAWMILL EMPLOYEES AS REPORTED BY EMPLOYERS, YEARS ENDING JUNE 30, AS BELOW.

Classification.	1900	1898	1897	1896	1895	1894	1893
Bookkeepers	\$24 83	\$24 83	\$26 00	\$70 00	\$36 46		
Foremen, per month	97 05	97 05	98 77	100 00	112 75	\$23 10	\$102 14
Engineers, per month	67 85	67 85	60 79	81 70	85 54	87 94	89 00
Laborers, per month	33 12	33 12	30 31	33 73	35 38	31 71	36 50
Edgers, per month	40 18	40 18	41 00	39 75	40 58	30 00	75 14
Off-bearers, per month	37 50	37 50	36 00	35 75	39 28	04 75	75 00
Teamsters, per month	45 00	45 00	48 00	35 04	39 17	41 11	44 19
Ratchet-setters, per month	61 00	61 00	60 75	42 12	47 50		
Sawyers, per day	3 67	3 67	3 60	3 28	3 51	3 00	3 71
Carpenters, per day	3 75	3 75	3 75	3 71	3 46		4 44
Blacksmiths, per day	3 00	3 00	3 75	2 00	3 04	3 25	2 41
Machinists, per day	3 75	3 75	3 75		3 37		3 25
Shingles sawyers, per 1000				06	06		10
Packers, per 1000				06	06		10
Cooks, per day	2 00	2 00	2 00				
Cook's helper, per day	1 20	1 20	1 25				
Choppers, per day	1 90	1 90	1 75				

COMPENSATION OF STREET RAILWAY EMPLOYEES JUNE 30, 1900.

Wages of Employees.	From	To
Motormen and conductors	\$2 00	\$3 50
Engineers	2 25	4 00
Assistant engineers	2 00	.....
Electricians	2 50	5 00
Machinists	4 00	.....
Car repairers	2 50	3 50
Track foremen	2 50	3 00
Trackmen	2 25	3 00
Linemen	2 50	3 50
Firemen	3 00	3 50
Laborers	2 00	3 00

SHOWING RANGE OF WAGES PAID TO EMPLOYEES IN BRICK YARDS IN MONTANA, YEAR ENDING JUNE 30, 1900.

Occupation.	Low.	High.	Occupation.	Low.	High.
Foremen, per month	\$100 00	\$150 00	Wheelers, per day	\$2 00	\$2 75
Engineers, per day	3 50	4 00	Teamsters, per day	2 50	3 00
Firemen, per day	2 50	3 00	Dumpers, per day	2 25	.....
Burners, per day	2 50	4 00	Yardmen, per day	3 00	.....
Temperers, per day	3 50	4 00	Moulders, per day	3 50	.....
Sanders, per day	3 50	4 00	Strikers, per day	4 50	5 00
Setters, per day	3 00	5 00	Laborers, per day	4 50	5 00
Truckers, per day	2 50	3 00	Sewer pipe makers, per day	2 50	4 00

AVERAGE WAGES OF BREWERY EMPLOYEES AS COMPILED FROM REPORTS OF EMPLOYERS, YEARS ENDING JUNE 30, 1900, ETC.

Occupation.	Average Wages.					
	1900	1898	1897	1896	1895	1894
Foremen	\$123 00	\$123 00	\$123 00	\$104 64	\$95 25	.....
Bookkeepers	95 00	95 00	97 00	.....	.....	.....
Collectors	110 50	110 50	112 50	.....	.....	.....
Engineers	120 75	120 75	121 00	94 77	100 00	81 00
Firemen	80 00	80 00	83 33	82 00	84 00	.....
Carpenters	106 80	106 80	107 50	.....	.....	.....
Coopers	97 75	97 75	97 65	82 00	82 85	90 50
Cellar foremen	91 00	91 00	91 00	.....	.....	.....
Brewers	81 25	81 25	81 25	84 79	80 96	79 11
Bartenders	70 15	70 15	80 67	100 35	92 00	88 10
Maltsters	82 00	82 00	82 90	88 60	89 75	86 08
Kettlemen	78 00	78 00	.....	.....	.....	.....
Elevator men	73 00	72 00	70 00	73 33	50 00	.....
Bottlers	65 00	65 00	67 75	75 00	.....	65 50
Apprentices	39 75	36 75	42 50	.....	.....	.....
Warehouse men	60 00	60 00	60 00	.....	.....	.....
Drivers	70 50	70 50	69 10	75 84	79 35	77 50
Watchmen	65 00	65 00	70 00	80 00	.....	75 00
Laborers	55 00	55 00	60 45	63 00	50 00	59 50

NOTE.—In certain case where employees received board an allowance of \$20.00 per month is made in making up the average rate of pay.

SEVENTH ANNUAL REPORT OF BUREAU

AVERAGE WAGES OF FOUNDRY EMPLOYEES JUNE 30, 1896, 1897, 1898 AND 1900
AS REPORTED BY EMPLOYEES.

Occupation.	1900	1898	1897	1896
Foreman foundry, per month	\$151 72	\$151 72	\$156 66	\$161 20
Foreman machinery, per month	149 00	149 80	175 00	.....
Pattern makers, per month	123 10	123 10	121 00	105 04
Draughtsman, per month	141 00	141 00	150 00	125 00
Bookkeepers, per month	90 00	90 00	108 32	101 66
Teamsters, per month	75 15	72 15	76 00	75 00
Watchmen, per month	60 00	60 00	65 00	.....
Machinists, per day	3 75	3 75	3 75	3 82
Moulders, per day	3 95	3 85	4 00	3 80
Foundry, helpers, per day	2 70	2 70	2 83	2 74
Apprentices, per day	2 25	2 25	2 25	1 43
Blacksmiths, per day	4 20	4 20	4 25	3 91
Cupolo tenders	2 75	2 75	2 00	3 00
Head chipper, per day .....	.....	.....	3 25	3 25
Engineers, per day	3 45	3 45	3 60	3 13
Core makers, per day	3 75	3 75	2 75	3 56
Assistant core makers, per day .....	.....	.....	3 50	.....
Carpenters, per day	3 60	3 60	3 00	4 17
Boiler makers, per day	4 00	4 00	4 00	4 00
Boiler makers' helpers, per day	2 95	2 95	3 00	2 74
Blacksmiths' helpers, per day	3 15	3 15	3 25	2 74
Sheet iron workers, per day	3 00	3 00	.....	3 25
Laborers, per day	2 20	2 20	.....	2 50

AVERAGE WAGES (WITH BOARD) OF FARM HANDS, RANGE RIDERS,
SHEEP HERDERS AND RANCH COOKS, JUNE 30, 1900, AS REPORTED BY
EMPLOYERS.

Counties	Farm Hands..	Sheep Herders	Range Riders..	Cooks, Male..	Cooks, Female	Counties	Farm Hands..	Sheep Herders	Range Riders..	Cooks, Male..	Cooks, Female
Beaverhead	\$30 00	\$34 45	\$32 50	\$35 00	\$30 50	L. & C	\$31 45	\$34 17	\$42 75	\$45 00	\$39 23
Broadwater	29 00	36 00	35 00	35 00	.....	Madison	32 00	34 00	35 00	40 00	23 25
Cascade	29 25	36 00	31 75	39 00	36 30	Meagher	32 00	37 00	33 50	23 75	23 00
Choteau	33 50	36 25	36 25	36 00	33 10	Park	30 50	37 50	40 00	.....	15 00
Custer	22 25	36 90	33 00	41 75	19 45	Sweet Grass	24 15	37 10	38 00	35 00	18 00
Dawson	30 35	31 50	35 00	40 00	17 00	Teton	32 00	34 25	38 00	35 00	24 17
Deer Lodge	22 50	35 00	40 00	35 00	35 00	Valley	32 00	38 00	40 00	38 50	30 00
Fergus	33 00	31 70	40 00	35 75	22 21	Yellowstone	32 24	35 91	40 00	.....	26 25

GENERAL AVERAGE FOR THE STATE.

Farm hands	\$31 00
Sheep herders	25 25
Range riders	35 00
Male cooks	22 24
Female cooks	22 71

SCALE OF PRICES FOR CIGAR MAKERS.

Clear Havana hand work cigars, five inches long, straight	\$23 per thousand
\$1.00 less on each quarter-inch shorter down to four inches or less.	
Seed and Havana hand work, five inches long, straight	\$18 per thousand
\$1.00 less on each quarter-inch shorter down to four inches or less.	
Clear seed hand work, five inches long, straight	\$16 per thousand
\$1.00 less on each quarter-inch shorter down to four inches or less.	
Clear seed mould work, five inches long, straight	\$13 per thousand
\$1.00 less on each quarter-inch shorter down to four inches or less.	
For cuttings, \$1.00 more than above scale of prices.	
Mixed, tipped or sprigged, same as clear Havana filler.	
All cigars not straight, \$1 extra.	
Sharper and less than five molds work, \$1 less than hand work.	
On hand scraps (scraps to be prepared), \$1 extra.	
All wages payable weekly in cash.	

AVERAGE WAGES OF EMPLOYEES IN AND AROUND MINES, MILLS AND SMELTERS IN PRINCIPAL EMPLOYING COUNTIES, AS TAKEN FROM REPORTS MADE BY EMPLOYERS FOR THE YEAR ENDING JUNE 30, 1900

MINES.

Occupation.	Granite County	Jefferson County	Lewis and Clarke County	Madison County	Meagher County	Missoula County	Park County	Raynolds County	Silver Bow County
Assayers								\$3.50	\$4.50
Blacksmiths	\$3.33	\$5.00	\$4.25	\$3.25	\$3.75			3.50	4.07
Blacksmiths helpers		3.00							3.00
Carmen and shovelers		3.00	3.00	3.00	3.00	3.00		2.50	2.50
Carpenters		4.00	5.00					3.00	4.50
Clerks and bookkeepers	mo 100.00	mo 150.00	mo 125.00						mo 124.07
Compressor men									3.50
Engineers		3.75	4.50	3.50	4.00			3.50	4.00
Firemen		3.00	3.00		3.50				3.50
Foremen	mo 177.50	mo 142.36	5.00	4.50	5.50		4.00	4.00	5.98
Laborers		3.30	3.00	3.50	2.50		2.50		3.00
Machinists		4.00	4.25						4.00
Miners	3.50	3.42	2.50	3.00	3.50	3.50	3.50	3.00	3.50
Pumpmen			4.00	4.00					4.00
Ropemen									3.50
Shift Bosses	4.00								4.93
Sta. Tenders									3.50
Timbermen					4.00			3.50	4.00
Teamsters	3.00								3.00

NOTE.—The Montana Ore Purchasing Co. and the mines owned and controlled by Hon. W. A. Clark, voluntarily reduced the hours of work from 10 to 8, for all miners employed in the properties during the summer of 1900.

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MILLS AND SMELTERS.

Occupation.	Cascade County.	Deer Lodge County.	Granite County.	Jefferson County.	Lewis & Clarke County.	Madison County.	Meagher County.	Ravalli County.	Silver Bow County.
Amalgamator			\$3.50-4.00		\$5.00		\$3.50		\$4.00
Assayer	m 775-105	m \$125-200				m 60.00			1.50
Blacksmiths	4-12	4.00			4.00				4.00-5.00
Blacksmiths' Helpers	3.70	3.00-3.50			3.50				3.00-3.50
Bookkeepers and Cl'ks	m 75-150	1.25-1.50							
Bricklayers	5.00-6.00	6.00-7.00							
Carpenters	3.50-4.25	4.50-5.00			4.00	3.50-6.00			4.00-6.00
Carpenters' Helpers	2.25-3.15				3.50				
Concentrator Men	2.50-3.50	3.75							3.50
Crusher Men			3.00					2.50	
Dippers	4.00	4.00-6.00							
Dynamo Tenders	3.50								
Electrolytic Men	2.25-2.50								
Electric Crane Men	3.25								
Electricians	2.00-4.00				3.50				
Engineers	3.00-4.00	4.00	4.00		3.50	3.50-4.50	4.00		4.00
Firemen	2.50-4.00	3.25-3.50			2.50				3.50-4.00
Foremen (by day)	3.25-5.00	3.50-5.50			4.00	4.00		4.00	4.00-5.00
Foremen (by month)	100-1.80	1.00-3.50	175.00		175.00				1.25-2.00
Feeders	2.50-3.25	3.00-3.50			3.00-6.00				3.50-4.00
Furnace Men	2.50-3.25	3.50							3.25
Ho Men									
Laborers	3.00-3.75	3.50-3.75	3.00	3.00	3.00	2.50	2.50		3.00-3.50
Lead Burners	5.77								
Lead Burners' Helpers	3.50								
Machinists	3.50-4.50	4.00-4.50			3.50-4.25				4.00-4.50
Machinists' Helpers	2.50-3.25	3.50			3.00-2.75				3.00-3.50
Masons	5.00	6.00-7.00			m 130.00				6.00
Masons' Helpers	2.25-3.50				2.25				4.50
Mill and Battery Men					3.00	3.75-4.00			3.50
Pokers and Graters	3.00-3.25								
Pot Pullers	3.50	3.00			2.50				3.00
Rope Splicers	3.00	3.00							
Roasters	2.25-3.50				2.25-2.50				3.50
Samplers	2.50-2.75	3.00			3.25-2.50				
Skimmers	3.50-4.00	3.50-4.00							4.00-4.50
Skimmers' Helpers		3.00							3.00
Tappers	2.50-3.25	3.50							4.00
Trammers	2.50-3.00				2.50	2.50			3.00
Vauers									3.25
Weighers	m 75-110	3.50-3.00			2.25				3.00
Watchmen	3.75	3.50-3.00			2.25				3.00-3.50
Hours work per day	8-12	8-10	12	8-10	10-12		8-12	12	8-12
Av No days' pay with									
held pay day	10	10	15	none	11	none	20	20	none
Hospital dues per man	1.00	1.50	1.00-1.50	1.25	1.50	1.00		1.00	1.00
Board and Lodging									
per week	5.50-6.25	5.50-6.25	7.00	7.00		5.25-7.00	7.00	5.00	6.00-7.00

WAGES OF COAL MINE EMPLOYEES AS REPORTED BY EMPLOYERS
JUNE 22, 1906.

Occupation.	Lowest.	Highest.
Superintendents, per month	\$150 00	\$183 25
Bookkeepers, per month	90 00	176 00
Electricians, per month	125 00	125 00
Store managers, per month	125 00	125 00
Store clerks, per month	75 00	75 00
Weighmen, per month	100 00	100 00
Foreman of mine, per day	3 25	5 00
Engineers, per day	2 15	4 00
Firemen, per day	2 25	3 00
Machinists, per day	2 50	4 00
Blacksmiths, per day	2 25	2 85
Blacksmith's helpers, per day	2 50	2 50
Carpenters, per day	2 00	2 00
Timbermen, per day	2 50	3 40
Tracklayers, per day	2 30	3 00
Jigmen, per day	3 00	3 00
Underground drivers, per day	2 75	3 13
Skilled mine laborers, per day	2 50	3 00
Common mine laborers, per day	3 00	3 00
Other laborers, per day	1 50	3 00
Trappers, per day	1 10	1 00
Machine drill helpers, per day	2 05	2 55
Miners, per ton	45	1 00
Loaders, per ton	20	20
Machine runners, per square foot	60	65
Drill runners, per hole	25	45

COST OF LIVING—(Continued.)

COUNTIES AND TOWNS.	Wheat, average price per bushel..	Rye, average price per bushel....	Barley, average price per bushel..	Oats, average price per bushel	Potatoes, average price per 100 lbs..	Pears, average price per 100 lbs..	Rutabagas, av'ge. price per 100 lbs..	Onions, average price per 100 lbs..	Baled Hay, first quality, per ton..	Baled Hay, second quality, per ton..	Loose Hay, first quality, per ton..	Loose Hay, second quality, per ton..	Eggs, per dozen	Ranch Butter, per pound	Poultry, average price, per dozen...
GRANITE CO.															
Garnet	1.05			.56	1.25	2.60	.75	2.00	13.00	14.00	12.00	9.00	20	20	20
Granite	.84			.53	1.00	.....	.50	1.75	16.00	12.00	14.00	10.00	20	20	20
JEFFERSON CO.															
Boulder	.75			.40	1.00	.....	.....	2.50	12.00	10.00	8.00	6.00	25	25	25
Whitehall	.60			.27	1.00	2.60	.....	2.00	11.00	9.00	11.00	9.00	20	20	20
LEWIS AND CLARKE CO.															
East Helena	.60			.40	.75	1.50	.....	1.75	12.00	9.00	12.00	8.00	25	25	25
Helena	.63			.394	.62	2.00	.50	1.25	10.00	10.00	11.00	9.00	15	15	15
Marysville	.68			.44	.70	.....	.50	.....	12.50	10.00	13.50	9.00	25	25	25
MADISON CO.															
Pony	.60			.272	.85	.....	.70	2.00	14.00	12.00	8.00	7.00	20	20	20
Rochester	.75			.40	.....	.....	.75	2.00	15.00	12.00	12.00	.....	20	20	20
Sheridan	.50			.384	1.00	2.00	1.00	4.00	10.00	9.00	6.00	5.00	20	20	20
Twin Bridges	.60			.44	1.00	4.00	.50	2.00	12.00	10.00	9.00	7.00	20	20	20
MISSOULA CO.															
Bozita	.72			.40	1.00	.....	.....	1.75	10.00	9.00	10.00	8.00	25	25	25
Farms	.55			.35	.50	.....	.....	1.50	12.00	.....	7.50	.....	20	20	20
Thompson	.60			.40	.75	.....	.50	2.00	12.00	10.00	9.00	.....	15	15	15
PARK CO.															
Jardine	.70			.465	1.25	.....	.....	3.00	.....	.....	.....	.....	25	25	25
RAVALLI CO.															
Hamilton	.60			.32	.75	1.50	.75	1.00	11.00	9.00	9.00	7.00	25	25	25
Stevensville	.40			.22				1.25	10.00	9.00	8.00	6.00	15	15	15

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COST OF LIVING—(Continued.)

COUNTIES AND TOWNS.	Poultry, average price per doz....	Ranch Butter, per pound	Eggs, per dozen	Loose Hay, second quality, per ton..	Loose Hay, first quality, per ton..	Baled Hay, second quality, per ton..	Baled Hay, first quality, per ton..	Onions, average price per 100 lbs	Rutabagas, average price per 100 lbs.	Pears, average price per 100 lbs.	Potatoes, average price per 100 lbs..	Oats, average price per bushel	Barley, average price per bushel..	Rye, average price per bushel....	Wheat, average price per bushel..
SILVER BOW CO.															
Butte			.30			9.00	12.00	1.25	.50		.90	.384			.00
SWEET GRASS CO.															
Medville			.15	5.00	8.00						1.00	.40			
TETON CO.															
Shelby				5.00	10.00	8.00	11.00	2.00	1.50	4.00	.75	.32	.72	.50	.75
VALLEY CO.															
Glasgow															
Glaco			.20	5.00			2.00	2.00	2.00		1.00	.52			1.20
YELLOWSTONE CO.															
Billings			.25	4.00	6.00	6.00	8.00	2.00	.75	3.00	.05	.32	.50		.51
Park City ..			.25	4.00	6.00	6.00	8.00	2.00	.75	3.00	.05	.32	.50		.51

COST OF LIVING BY AVERAGE PRICES OF GROCERIES AND MEATS AT WHOLESALE AND RETAIL AS AVERAGE FROM THE REPORTS OF LEADING MERCHANTS, DEALERS AND BUTCHERS IN PRINCIPAL CITIES AND TOWNS OF THE RESPECTIVE COUNTIES DURING YEAR ENDED JUNE 30, 1900.

ARTICLES.	Unit of Quantity.	Beaverhead.					Broadwater.		
		Bannack...	Dillon.....	Jackson....	Lima.....	Canton....	Radersburg.....	Tonton.....	
Flour: First quality, Imported	100 lbs	1.20	1.45	2.40	1.45				
Flour: First quality, Imported	per lb.	.016	.018	.034	.02				
Flour: First quality, Montana	100 lbs	2.40	2.40	2.40	2.40	1.71	2.00	2.50	
Flour: First quality, Montana	per lb.	.024	.024	.024	.024	.017	.022	.025	
Flour: Second quality, Imported	100 lbs	1.10		1.05				1.90	
Flour: Second quality, Imported	per lb.			.0105				.019	
Flour: Second quality, Montana	100 lbs					1.40	1.50	2.20	
Flour: Second quality, Montana	per lb.					.014	.015	.022	
Corn Meal	100 lbs.	3.00	1.80	2.00	1.85	1.85	.02		
Corn Meal	per lb.		.018		.0185	.0185	.002		
Roll'd Oats	100 lbs		2.475		2.85	2.40	.04		
Roll'd Oats	per lb.		.04		.04	.024	.004		
Sugar	100 lbs		6.40		6.75	6.00	6.00	6.75	
Sugar	per lb.		.064		.0675	.06	.06	.0675	
Tea	Wholesale		.45		.37	.35	.35	.40	
Tea	Retail	1.00	.50	.75	.50	.45	.50	.50	
Coffee	Wholesale		.125		.14	.11	.125	.125	
Coffee	Retail		.15	.30	.20	.15	.15	.15	
Lard	Wholesale		.10		.094	.09		.12	
Lard	Retail		.11	.15	.104	.10	.11	.11	
Bacon	Wholesale		.125		.12	.12	.10	.114	
Bacon	Retail		.14	.16	.13	.12	.10	.124	
Ham	Wholesale		.12		.14	.12	.12	.12	
Ham	Retail		.14	.16	.15	.13	.12	.12	
Butter	Wholesale		.24		.25	.25	.25	.25	
Butter	Retail		.26	.28	.28	.28	.28	.28	
Eggs	Per case		.17		.16	.16	.16	.16	
Eggs	Per dozen		.16	.25	.16	.25	.16	.16	
Potatoes	Wholesale 100 lbs		.40		.40	.40	.40	.40	
Potatoes	Retail 100 lbs		.45		.45	.45	.45	.45	
Canned Vegetables	Per case		2.25	1.00	1.00	1.00	.75	1.00	
Canned Vegetables	Per can		.10	.15	.15	.15	.15	.15	
Canned Fruit	Per case		3.00		2.75	2.75	2.75	2.75	
Canned Fruit	Per can		.25	.20	.20	.20	.20	.20	
Boiling Meats	Wholesale, lb								
Boiling Meats	Retail, lb						.07		
Steaks	Wholesale, lb								
Steaks	Retail, lb						.14		

COST OF LIVING—Continued.

ARTICLES.	Unit of Quantity	Carbon						Cascade		
		Bridge.	Gebo.	Rockvale.	Roberts.	Red Lodge.	Belt.	Great Falls.	Havre.	
Flour: First quality, imported	100 lbs	2.50	1.90			2.15	2.50	2.25		
Flour: First quality, imported	per lb	.005	.005			.005	.005	.005		
Flour: First quality, Montana	100 lbs	2.50	2.00		1.80	1.90	2.40	2.15	2.40	
Flour: First quality, Montana	per lb	.005	.005		.02	.024	.007	.004	.006	
Flour: Second quality, imported	100 lbs		1.90			1.80	2.00	2.00	2.00	
Flour: Second quality, imported	per lb		.005			.004	.005	.005	.005	
Flour: Second quality, Montana	100 lbs	2.00	1.85	1.75	1.65	1.70	2.00	2.00	2.00	
Flour: Second quality, Montana	per lb	.02	.004	.021	.01	.02	.004	.005	.005	
Corn Meal	100 lbs	2.00	1.90	2.00	1.80	1.90	2.35	1.90	2.00	
Corn Meal	per lb	.02	.004	.02	.01	.024	.008	.005	.005	
Roll'd Oats	100 lbs	3.15	2.90	3.30	1.90	2.90	4.00	2.90	3.75	
Roll'd Oats	per lb	.035	.035	.035	.02	.035	.05	.035	.045	
Sugar	100 lbs	6.40	6.25	6.25	6.30	6.15	6.75	6.35	6.35	
Sugar	per lb	.07	.07	.07	.07	.07	.07	.07	.07	
Tea	Wholesale									
Tea	Retail	.50	.60	.80	.50	.40	.30	.27	.25	
Coffee	Wholesale									
Coffee	Retail	1.20	1.25	1.25	.12	.12	.12	.12	.12	
Lard	Wholesale	.15	1.00	.40	.15	.15	.15	.15	.15	
Lard	Retail	.10	.11	.10	.095	.09	.09	.09	.09	
Bacon	Wholesale									
Bacon	Retail	.11	.14	.10	.11	.105	.08	.10	.105	
Ham	Wholesale									
Ham	Retail	.11	.14	.11	.12	.115	.11	.115	.11	
Butter	Wholesale									
Butter	Retail	.15	.16	.14	.15	.14	.13	.13	.13	
Eggs	Wholesale									
Eggs	Retail	.25	.25	.20	.25	.25	.25	.25	.25	
Potatoes	Per case	.35	6.00	4.50	5.30	5.30	4.50	4.50	4.00	
Potatoes	Per doz	.35	.30	.15	.30	.30	.25	.25	.25	
Canned Vegetables	Wholesale, 100 lbs									
Canned Vegetables	Retail 10 lbs	1.00	1.50	1.75	.70	1.00	.75	1.00	.55	
Canned Vegetables	Per case	2.40	2.00	2.75	2.30	2.35	2.25	2.25	2.00	
Canned Fruit	Per can	.125	.125	.125	.125	.125	.125	.125	.125	
Canned Fruit	Per case	3.75	2.00	4.50	2.00	2.00	4.00	4.00	4.00	
Boiling Meats	Wholesale lb									
Boiling Meats	Retail lb	.13				.12	.08	.08	.08	
Steaks	Wholesale lb					.10	.10	.10	.10	
Steaks	Retail lb	.16				.15	.15	.15	.15	

COST OF LIVING—Continued.

ARTICLES.		Unit of Quantity.	Cascade.		Choteau.		Custer.	
			Neilhart	Sand Coulee.	Sunnyside...	Chinook.....	Ft. Benton..	Ekakaka.....
Flour: First quality, imported	100 lbs	2.85		2.30	2.35	2.40	2.00	2.00
Flour: First quality, imported	per lb			.005	.005	.005	.005	
Flour: First quality, Montana	100 lbs	2.75		2.30	2.35	2.30	2.00	2.50
Flour: First quality, Montana	per lb			.005	.005	.005		
Flour: Second quality, imported	100 lbs			2.00	2.00		2.75	
Flour: Second quality, imported	per lb			.004	.004		.003	
Flour: Second quality, Montana	100 lbs	2.40		2.00	2.00			
Flour: Second quality, Montana	per lb			.004	.004			
Flour: Second quality, Montana	100 lbs	2.00		1.60	2.00	1.55	2.50	2.75
Flour: Second quality, Montana	per lb			.004	.005	.005	.005	.003
Corn Meal	100 lbs	2.80		2.30	2.30	2.40	2.00	2.00
Corn Meal	per lb			.005	.005	.005	.005	.005
Roller Oats	100 lbs	6.00		5.25	6.75	6.25	7.50	7.00
Roller Oats	per lb			.06	.06	.06	.07	.06
Sugar	100 lbs	.50		.15	.15	.14	.14	.13
Sugar	per lb			.005	.005	.005	.005	.005
Tea	Wholesale			.15	.15	.15	.15	.15
Tea	Retail			.15	.15	.15	.15	.15
Coffee	Wholesale			.10	.10	.10	.10	.10
Coffee	Retail			.10	.10	.10	.10	.10
Lard	Wholesale			.15	.15	.15	.15	.15
Lard	Retail			.15	.15	.15	.15	.15
Bacon	Wholesale			.15	.15	.15	.15	.15
Bacon	Retail			.15	.15	.15	.15	.15
Ham	Wholesale			.15	.15	.15	.15	.15
Ham	Retail			.15	.15	.15	.15	.15
Butter	Wholesale			.15	.15	.15	.15	.15
Butter	Retail			.15	.15	.15	.15	.15
Eggs	Per case			5.50	5.50	5.50	5.50	5.50
Eggs	Per doz			5.50	5.50	5.50	5.50	5.50
Potatoes	Wholesale 100 lbs			1.00	1.00	1.00	1.00	1.00
Potatoes	Retail 100 lbs			1.25	1.25	1.25	1.25	1.25
Canned Vegetables	Per case			2.50	2.50	2.50	2.50	2.50
Canned Vegetables	Per can			2.50	2.50	2.50	2.50	2.50
Canned Fruit	Per case			4.25	4.25	4.25	4.25	4.25
Canned Fruit	Per can			4.25	4.25	4.25	4.25	4.25
Boiling Meats	Wholesale lb			.10	.10	.10	.10	.10
Boiling Meats	Retail lb			.15	.15	.15	.15	.15
Sticks	Wholesale lb			.10	.10	.10	.10	.10
Sticks	Retail lb			.15	.15	.15	.15	.15

COST OF LIVING—Continued.

ARTICLE.	Unit of Quantity	Dear Lodge				Fergus				
		Deer Lodge.	Elliston.....	Ovando.....	Pioneer.....	Judith.....	Lavina.....	Lewistown..	Stanford....	Ubet.....
Flour: First quality, imported	10 lbs	2.40	2.75	3.00	3.00	3.00	2.75	2.75	2.75	2.40
Flour: First quality, imported	10 lbs	.08%	.03	.03	.03	.03	.03	.03	.03	2.60
Flour: First quality, Montana	10 lbs	2.25	2.40	2.60	2.60	2.60	2.50	2.50	2.50	2.60
Flour: First quality, Montana	10 lbs	.05	.03%	2.10	2.10	2.10	.08%	.08%	.08%	2.85
Flour: Second quality, imported	10 lbs	1.85	2.00	2.10	2.10	2.10	2.00	2.00	2.00	2.40
Flour: Second quality, imported	10 lbs	.02	.01	.01	.01	.01	.01	.01	.01	2.70
Flour: Second quality, Montana	10 lbs	1.40	1.50	1.60	1.60	1.60	1.50	1.50	1.50	2.10
Flour: Second quality, Montana	10 lbs	.02	.01	.01	.01	.01	.01	.01	.01	2.10
Corn Meal	50 lbs	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.10
Rolls Oats	50 lbs	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.10
Rolls Oats	50 lbs	.05	.05	.05	.05	.05	.05	.05	.05	2.10
Sugar	100 lbs	6.75	6.25	7.00	7.00	7.00	6.50	6.50	6.50	7.00
Sugar	100 lbs	.07	.06	.07	.07	.07	.06	.06	.06	.075
Tea	100 lbs	4.00	3.50	4.00	4.00	4.00	3.50	3.50	3.50	4.00
Tea	100 lbs	.50	.50	.50	.50	.50	.50	.50	.50	4.00
Coffee	100 lbs	13.15	11.15	12.15	12.15	12.15	11.15	11.15	11.15	12.15
Coffee	100 lbs	.09	.09	.09	.09	.09	.09	.09	.09	12.15
Lard	100 lbs	10.10	11.10	11.10	11.10	11.10	10.10	10.10	10.10	11.10
Lard	100 lbs	.10	.11	.11	.11	.11	.10	.10	.10	11.10
Bacon	100 lbs	12.15	13.15	13.15	13.15	13.15	12.15	12.15	12.15	13.15
Bacon	100 lbs	.12	.13	.13	.13	.13	.12	.12	.12	13.15
Ham	100 lbs	14.15	15.15	15.15	15.15	15.15	14.15	14.15	14.15	15.15
Ham	100 lbs	.14	.15	.15	.15	.15	.14	.14	.14	15.15
Butter	100 lbs	20.20	20.20	20.20	20.20	20.20	20.20	20.20	20.20	20.20
Butter	100 lbs	.20	.20	.20	.20	.20	.20	.20	.20	20.20
Eggs	100 lbs	4.00	7.00	5.50	5.50	5.50	4.00	4.00	4.00	5.50
Eggs	100 lbs	.75	.75	.75	.75	.75	.75	.75	.75	5.50
Potatoes	100 lbs	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Potatoes	100 lbs	.75	.75	.75	.75	.75	.75	.75	.75	1.00
Canned Vegetables	Per case	2.75	2.40	3.00	3.00	3.00	2.50	2.50	2.50	3.00
Canned Vegetables	Per can	.15	.15	.15	.15	.15	.15	.15	.15	3.00
Canned Fruit	Per case	3.25	4.90	4.75	4.75	4.75	3.25	3.25	3.25	4.75
Canned Fruit	Per can	.20	.25	.25	.25	.25	.20	.20	.20	4.75
Boiling Meats	Ret. lbs	.06	.06	.07	.07	.07	.06	.06	.06	.07
Boiling Meats	Ret. lbs	.10	.10	.07	.07	.07	.10	.10	.10	.07
Steaks	Ret. lbs	.15	.15	.09	.09	.09	.15	.15	.15	.09
Steaks	Ret. lbs	.15	.15	.	.	.	.	.	.	1.15

COST OF LIVING—Continued.

ARTICLES.	Unit in Quantity	Flathead		Gallatin		Granite		Jefferson		
		KalisPELL	Marston	Belgrade	Bozeman	Logan	Drummond	Garnet	Boulder	Whitehall
Flour: First quality, imported	100 lbs	2.40								.08%
Flour: First quality, imported	Per lb	2.30	2.75	2.30	2.30	2.30	.08%	2.15	2.10	2.10
Flour: First quality, Montana	Per lb	2.30			.004	2.00	.08%	2.75	2.00	.005
Flour: Second quality, imported	Per lb					.007	.08%	.005		
Flour: Second quality, imported	Per lb	1.80	2.50	1.80	1.40	1.20	1.00	1.00	1.85	.02
Flour: Second quality, Montana	Per lb				.015	.01%	.03	.025	.02	
Corn Meal	Per lb	2.25	4.50	2.00	1.40	1.50	1.05	2.75	2.00	.03
Roller Oats	Per lb	.025	4.50	3.75	2.00	2.70	3.00	4.00	3.30	.03
Roller Oats	Per lb	.025			.04	.04	.04	.04	.03	
Sugar	Per lb	6.75	.08	0.25	5.50	6.10	6.00	7.25	6.25	6.50
Sugar	Per lb	.07%				.06%	.065	.06	.07	.065
Ten	Wholesale	.35				.38	.40	.40	.42	.40
Tea	Retail	.60	.60	.60	.60	.60	.60	.60	.60	.60
Coffee	Wholesale	.15			.14	.12%	.12	.125	.10	.15
Coffee	Retail	.20	.175	.30	.14%	.13%	.13	.15	.20	.15
Lard	Wholesale	.10			.07%	.08%	.065	.105	.09	.10
Lard	Retail	.12	.13	.10	.11	.10%	.10	.11	.10	.10
Bacon	Wholesale	.10%			.10%	.09	.10%	.105	.09	.10
Bacon	Retail	.125	.14	.12	.105	.125	.125	.135	.115	.12
Ham	Wholesale	.11%			.10%	.115	.115	.125	.10%	.125
Ham	Retail	.14	.15	.14	.13	.14	.14	.145	.135	.135
Butter	Wholesale	.125				.25		.20	.25	.25
Butter	Retail	.15	.25	.25	.20	.25		.25	.25	.25
Eggs	Per case	4.50			4.50	7.00	4.00	5.00	6.00	5.00
Eggs	Per doz	.50	.20	.15	.15	.70	.25	.25	.25	.20
Potatoes	Whol 100 lbs	.50	.75	.75	.70	.70	.75	.75	.75	.75
Potatoes	Ret. 100 lbs	2.50	.75	.75	2.00	1.00	.75	2.00	1.00	1.00
Canned Vegetables	Per can	.15	.15	.125	1.25	1.25	1.15	1.15	1.15	.10
Canned Fruit	Per case	3.75	4.00	4.20	3.75	3.75	3.40	4.00	4.00	.20
Canned Fruit	Per can	.25	.20	.20	.20	.20	.20	.20	.20	.20
Boiling Meats	Whol. lb	.075			.08	.08	.10	.10	.10	.08
Boiling Meats	Ret. lb	.08	.08	.08	.10	.10	.10	.10	.10	.08
Steaks	Whol. lb	.10			.10	.10	.10	.10	.10	.10
Steaks	Ret. lb	.125			.125	.12		.15		.125

COST OF LIVING—Continued.

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COST OF LIVING—Continued.

ARTICLES.	Unit in Quantity	Park				Ravalli				Sta. Row		S. Grae		Teton	
		Jardine.....	Corvallis....	Grantsdale..	Hamilton....	Stevensville.	Butte.....	Melville.....	Dupuyer.....	Lowry.....	Shelby.....				
Flour: First quality, imported	100 lbs	3.10	3.10	3.50	2.75	.....	2.70	2.45	2.75	.....	1.80				
Flour: First quality, imported	per lb	.035	.035	.035	.035	.....	.035	.035	.....	.....	.013				
Flour: First quality, Montana	100 lbs	2.15	2.15	1.50	2.10	2.50	2.10	2.10	2.50	1.95	1.95				
Flour: First quality, Montana	per lb	.025	.025	.025	.025	.025	.025	.025	.025	.025	.025				
Flour: Second quality, imported	100 lbs	1.50	1.50	.....	.....	.....	2.30	1.75	2.50	.....	1.40				
Flour: Second quality, imported	per lb	.020	.020	.....	.....	.....	.020	.020	.020	.....	.014				
Flour: Second quality, Montana	100 lbs	1.40	1.40	.....	.....	.....	1.50	.....	2.35	.....	1.40				
Flour: Second quality, Montana	per lb	.015	.015	.....	.....	.....	.015	.....	.015	.....	.013				
Corn Meal	100 lbs	2.50	1.30	1.75	2.25	2.00	1.45	2.00	2.50	1.60	1.60				
Roller Oats	per lb	.03	.03	.035	.03	.035	.035	.035	.035	.035	.03				
Roller Oats	100 lbs	4.50	2.10	2.50	2.75	3.00	2.40	3.25	3.50	2.50	2.75				
Roller Oats	per lb	.05	.05	.035	.035	.035	.04	.04	.04	.03	.035				
Sugar	100 lbs	5.75	5.50	5.25	5.15	5.50	5.25	5.00	7.25	6.40	6.40				
Sugar	per lb	.07	.07	.07	.07	.07	.07	.07	.07	.07	.07				
Tea	Wholesale	.55	.40	.35	.35	.40	.35	.35	.....	.....	.....				
Tea	Retail	.55	.40	.35	.35	.40	.35	.35	.....	.....	.....				
Coffee	Wholesale	.30	.14	.12	.12	.12	.12	.12	.40	.30	.30				
Coffee	Retail	.30	.14	.12	.12	.12	.12	.12	.40	.30	.30				
Lard	Wholesale	.05	.05	.05	.05	.05	.05	.05	.10	.05	.05				
Lard	Retail	.05	.05	.05	.05	.05	.05	.05	.10	.05	.05				
Bacon	Wholesale	.10	.10	.10	.10	.10	.10	.10	.10	.10	.10				
Bacon	Retail	.12	.10	.09	.11	.10	.11	.11	.10	.10	.11				
Ham	Wholesale	.13	.11	.11	.11	.11	.11	.11	.11	.11	.11				
Ham	Retail	.14	.11	.11	.11	.11	.11	.11	.11	.11	.11				
Butter	Wholesale	.30	.20	.20	.20	.20	.20	.20	.25	.20	.20				
Butter	Retail	.30	.25	.25	.25	.25	.25	.25	.25	.25	.25				
Eggs	Per case	6.50	.....	.....	.....	5.00	4.00	.....	6.00	.....	4.50				
Eggs	Per doz	.35	.....	.....	.....	.35	.30	.....	.35	.....	.30				
Potatoes	Whol. 100 lbs	1.20	.45	.50	.75	.50	1.00	1.00	1.00	1.00	.45				
Potatoes	Ret. 100 lbs	.60	.60	.60	1.00	.60	.60	.60	1.00	1.00	.60				
Canned Vegetables	Per case	2.00	2.00	2.00	2.40	2.40	2.40	2.40	2.60	2.60	2.00				
Canned Vegetables	Per can	1.50	1.50	1.50	1.55	1.55	1.55	1.55	1.55	1.55	1.55				
Canned Fruit	Per case	4.50	3.50	3.50	3.00	4.25	4.00	3.50	4.00	3.00	4.00				
Canned Fruit	Per can	.30	.30	.35	.30	.30	.30	.30	.30	.30	.30				
Boiling Meats	Whol. lb .....	.....	.08	.08	.07	.07	.10	.....	.....	.....	.07				
Boiling Meats	Retail lb .....	.....	.10	.10	.09	.09	.12	.....	.....	.....	.10				
Stocks	Whol. lb .....	.....	.11	.11	.....	.....	.15	.....	.....	.....	.15				
Stocks	Retail lb .....	.....	.15	.15	.....	.....	.20	.....	.15	.....	.20				

COST OF LIVING—Continued.

ARTICLES.	Unit in Quantity	Valley					Yellowstone		
		Culbertson..	Glasgow.....	Naahua.....	Saco.....	Billings.....	Columbus...	Park City....	
Flour: First quality, imported	100 lbs	1.85	2.50	2.25	.....	2.10	.....	2.00	
Flour: First quality, imported	per lb	.021	.....	.025	.....	.023	.....	.....	
Flour: First quality, Montana	100 lbs	.....	2.50	2.00	2.50	2.00	.....	1.90	
Flour: First quality, Montana	per lb	.....	.....	.025	.....	.023	.024	.024	
Flour: Second quality, imported	100 lbs	.....	.....	1.75	2.00	.....	.....	.....	
Flour: Second quality, imported	per lb	.....	.....	.02	.....	.....	.....	.....	
Flour: Second quality, Montana	100 lbs	.....	.....	.....	.....	.....	1.45	1.80	
Flour: Second quality, Montana	per lb	.....	.....	.....	.....	.....	.014	.022	
Corn Meal	100 lbs	2.10	3.00	1.00	4.00	.....	1.00	1.25	
Corn Meal	per lb	.025	.03	.015	.....	.....	.024	.03	
Rolls Oats	100 lbs	3.20	4.00	3.00	4.00	.....	2.05	2.25	
Rolls Oats	per lb	.045	.05	.05	.....	.....	.035	.04	
Sugar	100 lbs	6.50	7.00	5.50	7.00	.....	6.00	6.25	
Sugar	per lb	.065	.074	.07	.....	.....	.064	.065	
Tea	Wholesale	.80	.....	.40	.50	.....	.25	.27	
Tea	Retail	.50	.50	.13	.50	.....	.40	.40	
Coffee	Wholesale	.13	.13	.13	.13	.....	.11	.114	
Coffee	Retail	.15	.25	.17	.20	.....	.125	.124	
Lard	Wholesale	.085	.....	.09	.12	.09	.08	.085	
Lard	Retail	.11	.10	.08	.10	.09	.09	.094	
Bacon	Wholesale	.12	.125	.10	.13	.116	.11	.114	
Bacon	Retail	.12	.13	.10	.13	.116	.11	.114	
Ham	Wholesale	.15	.15	.15	.14	.13	.13	.134	
Ham	Retail	.22	.20	.20	.25	.25	.20	.20	
Butter	Wholesale	.28	.30	.25	.25	.25	.20	.25	
Butter	Retail	4.00	4.50	.....	.....	.....	6.00	6.00	
Eggs	Per case	35	35	30	25	25	30	30	
Eggs	Per can	1.25	1.25	1.00	1.50	.85	.75	.60	
Potatoes	Wholesale 100 lbs	1.50	1.50	1.50	1.50	.....	2.10	2.75	
Potatoes	Retail 100 lbs	2.40	.....	2.25	.....	.....	2.10	2.75	
Canned Vegetables	Per case	.15	.15	.15	.15	.....	.....	.....	
Canned Vegetables	Per can	4.00	.....	2.25	.....	.....	3.85	.....	
Canned Fruit	Per case	.25	.25	.25	.25	.....	.....	.....	
Canned Fruit	Per can	.....	.....	.08	.....	.....	.....	.....	
Bolting Meats	Wholesale lb	.....	.....	.....	.....	.....	.....	.....	
Bolting Meats	Retail lb	.....	.....	.....	.....	.....	.....	.....	
Steaks	Wholesale lb	.....	.....	.....	.....	.....	.....	.....	
Steaks	Retail lb	.....	.....	.15	.40	.....	.....	.....	

STATEMENT SHOWING PROPORTIONATE SALES, EXPRESSED IN PERCENTAGES, OF CERTAIN "MONTANA" AND "IMPORTED" PRODUCTS, THE INCREASED OR DECREASED SALES OF MONTANA FARM PRODUCTS, AND STATES FROM WHENCE PRODUCTS ARE IMPORTED, AS REPORTED BY OR AVERAGED FROM PRODUCTS OF PRINCIPAL DEALERS IN PLACES NAMED, FOR YEAR ENDING JUNE 30, 1900.

(A number of those reporting Market Prices, as reported in another table, did not fill in statement of relative sales, hence those places are necessarily omitted in these tables. It is believed, however, to show closely the proportionate amounts sold throughout the State.)

The "Dealers" from whom these Reports were received do not include Butchers and Meat Markets. It is probable these would have shown a larger percentage of Montana cured meats sold if reports had been obtained from them.

COUNTY AND TOWN.	FLOUR.					PORK, BACON, HAM.				
	Per Cent of Montana sold	Per Cent of Imported sold	Per cent increased sale Montana product ..	Per cent decreased sale Montana product ..	From what states "Imported" product principally obtained.	Per Cent of Montana sold	Per cent of Imported sold	Per cent increased sale Montana product ..	Per cent decreased sale Montana product ..	From what states "Imported" product principally obtained.
BEAVERHEAD CO.										
Bannack		75			Idaho	100				Mo.; Neb
Dillon	5	95			Idaho	100				Neb
Jackson		100			Idaho	100				Neb
BROADWATER CO.										
Canton	100					100				Neb
Radersburg	100					100				
CARBON CO.										
Bridger	90	10			Dakota	100				Neb
Gebo	98	2			Dakota	1	99			Neb
Red Lodge	75	25			Dakota	100				Neb
Roberts	100					100				Neb
Rockvale	100					100				Neb
CASCADE CO.										
Belt	100		10			100				La.; Mo.
Great Falls	100					100				
Sand Coulee	100					100				Neb
CHOTEAU CO.										
Chinook	90	10			N. D.	100				Neb
Ft. Benton	75	25			Minn	100				Neb
CUSTER CO.										
Ekulaka		100			N. D.	100				La
Stacey	10	90			N. D.	100				Minn
DEER LODGE CO.										
Deer Lodge	75	25			Nebr	100				Neb
Elliston	75	25			Dak	5	95	95		Ill.; Neb.
Ovando	100					10	90	90		Kan
Pioneer	25	75			N. D.	100	100			Mo.
FERGUS CO.										
Judith		100			Dak	100	90			Ill.
Lavina	90					100				
Lewistown	85	15				100				
Stanford	90					100				
FLATHEAD CO.										
Kallispell	100					10	90			Neb.
Marston	100						100			La.; Kan.

STATEMENT SHOWING PROPORTIONATE SALES—Continued.

COUNTY AND TOWN.	FLOUR.					PORK, BACON, HAM.				
	Per Cent of Montana sold	Per cent of Imported sold	Per cent of Increased sale Montana product	Per cent decreased sale Montana product	From what states "Imported" product principally obtained.	Per cent of Montana sold	Per cent of Imported sold	Per cent of Increased sale Montana product	Per cent decreased sale Montana product	From what states "Imported" product principally obtained.
GALLATEN CO.										
Belgrade	100					50				Mo.
Bosman	100					50				Ill.
Logan	100					100				Neb.
Manhattan	100					100				Neb.
GRANITE CO.										
Drummond	100					100				Neb.
Garnet	80	30	10			100				Neb.; Ia.; M
Granite	100					100				Neb.
JEFFERSON CO.										
Boulder	50	50			Minn.; Ill.	100				Dak.
Whitehall	95	5			Minn.; Ill.	100				
LEWIS & CLARKE CO.										
East Helena	90	30				100				
Helena										
Marysville	85	15	40		Minn. Mo. Neb. Ill.					
MADISON CO.										
Rochester	100					100				Neb.
Sheridan	75	25			Dak.	25	75			Mo.
Twin Bridges	90	10				5	95			
MISSOULA CO.										
Bonita	75	25			Dak.	100				Ill.; Neb.
Plains	50	50			Idaho	100				Wash.
Thompson Falls	5	95			Wash.	100				Neb.
PARK CO.										
Jardine	100					100	20			Neb.; Ill.
RAVALLI CO.										
Corvallis	75	25	10		Minn.	20	50		15	Mo.; Ill.
Grantsdale	100		50				90			Mo.; Kan.; N
Hamilton	80	20			Minn.	25	75			Neb.
Stevensville	100					10	90			Neb.
SILVER BOW CO.										
Butte	55	45			Min. N D. Neb.	95	05			Kan.; Neb.
SWEET GRASS CO.										
Meiville	50	50			N. D.		100			Neb.
TESTON CO.										
Shelby	100						100			Minn.
VALLEY CO.										
Culbertson	10	90			N. D.		100			Minn.
Glasgow	100						100			Minn.
Nashua	100						100			
Saco	100						100			Minn.
YELLOWSTONE CO.										
Billings	90	10			N. D.		100			Neb.
Columbus	100						100			
Park City	100						100			

STATEMENT SHOWING PROPORTIONATE SALES—Continued.

COUNTY AND TOWN.	LAND.				BUTTER.			
	Per cent of Montana sold.....	Per Cent of Import- ed sold.....	Per of increased sale Montana product	Per of decreased sale Montana product..	From what states "imported" product prin- cipally ob- tained.	Per cent of Montana sold.....	Per of increased sale Montana product..	Per of decreased sale Montana product
BRAVERHEAD CO.								
Bannack	100				Mo.; Neb	50		Utah; Idaho...
Dillon	100				Neb	10		Idaho
Jackson								
BROADWATER CO.								
Canton	20	80				100		
Hadersburg	50	50			Neb.	25		
CARBON CO.								
Bridger	100				Neb.	85	75	Neb.
Gebo	1	99			Neb	35	5	Wyo.; Nebr..
Red Lodge	100				Neb	23	75	
Roberts	100				Neb.	100		
Rockvale	100				Neb.	100		
CASCADE CO.								
Belt	95	95			Id.; Mo.	35	35	Minn.
Great Falls	100					25	75	
Sand Coulee	35	65			Neb	70	80	Minn.; Dak.
CHOTEAU CO.								
Chinook	100				Neb.	60	80	Minn.
Ft. Benton	100				Neb	100		Minn
CUSTER CO.								
Hickoka	100				Id	90	10	Minn.
Stacey	100				Minn	90	10	
DEER LODGE CO.								
Deer Lodge	100				Neb	90	10	Minn.
Elliston	5	95			Ill.; Neb	90	10	Mont
Ovando	10	90			Kan.	80		
Pioneer	100				Mo.	100		Id. D.
FERGUS CO.								
Judith	100				Ill	100		Minn
Lavina	100					100		
Lewistown	100					25	15	
Stanford						60	40	Minn.
FLATHEAD CO.								
Kalspell	10	90	10		Neb	75	25	30
Marston	60	60			Id.; Kan	75	25	Wash
GALLATIN CO.								
Belgrade	50	50			Ill.	100		
Boseman	15				Mo.	90		Utah.
Logan	100				Neb	100		
Manhattan	5	95			Neb	100		
GRANITE CO.								
Drummond		100			Neb	100		
Garnet	95	5			Neb	35	15	Neb. Mo. Min
Granite	100				Neb	5	95	N. D.
JEFFERSON CO.								
Boulder	100					50	50	
Whitehall		100				95	5	Minn.
LEWIS & CLARKE CO.								
East Helena						50	50	
Helena						5	95	(Minn.; N. D.
Marysville	75	25	50			10	90	Wis.; Ill.; Minn.; Dak.

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STATEMENT SHOWING PROPORTIONATE SALES—Continued.

COUNTY AND TOWN.	LARD.					BUTTER.				
	Per Cent of Montana sold	Per Cent of Import.	Per Cent increased sale Montana product	Per cent decreased sale Montana product	From what states "Imported" product principally obtained.	Per Cent of Montana sold	Per Cent of Import.	Per Cent increased sale Montana product	Per cent decreased sale Montana product	From what states "Imported" product principally obtained.
MADISON CO.										
Rochester		100			Neb	50	50			Kan.....
Sheridan	25	75			Mo	85	15			
Twin Bridges	10	90				40	60			
MISSOULA CO.										
Bonita	10	90			Ill.; Neb.....	5	95			Minn.....
Plains		100			Wash	100				
Thompson Falls		100			Neb	5	95			N. D.....
PARK CO.										
Jardine		100			Neb.; Ill.	10	90			Minn.....
RAVALLI CO.										
Corvallis	10	90		5		100		10		
Grantsdale		100				100				
Hamilton	25	75			Neb	100				
Stevensville	10	90			Neb	100				
SILVER BOW CO.										
Butte	65	95				20	80			Ill.; Ia.; Neb (Minn.)
SWEET GRASS CO.										
Melville		100			Neb	75	25	10		Ill.....
TETON CO.										
Shelby		100			Minn	5	95			Minn.....
VALLEY CO.										
Culbertson		100			Minn	10	90			Minn.....
Glasgow		100				100				
Nashua		100				75	25			
Saco		100			Minn	50	50			Minn.....
YELLOWSTONE CO.										
Bilings		100			Neb.....	40	60			Minn.....
Columbus		100				90	10			Minn.....
Park City		100				100				

STATEMENT SHOWING PROPORTIONATE SALES—Continued.

COUNTY AND TOWN.	CHEESE.				POULTRY.			
	Per Cent of Montana sold	Per cent of imported sold	Per at increased sale Montana product...	From what states "Imported" product principally obtained.	Per cent of Montana sold	Per Cent of Import. ed sold	Per at increased sale Montana product...	From what states "Imported" product principally obtained.
MADISON CO.								
Rochester		100		Kan	100			
Sheridan		100		N. Y.	100			
Twin Bridges		100			86	14		
MISSOULA CO.								
Bonita		100						
Plains		100						
Thompson Falls		100		Wash	80	80		Wash
PARK CO.								
Jardine		100		Minn	10	90		Idaho
RAVALLI CO.								
Corvallis		100			100			
Grantsdale								
Hamilton		100						
Stevensville	60	60		Minn	100			
SILVER BOW CO.								
Butte	25	75		Wis.; N. Y. Ut	66	86		Utah; Ida; (Kan.; Neb...
SWEET GRASS CO.								
Meiville	10	90		Minn				
TETON CO.								
Shelby		100			25	75		
VALLEY CO.								
Culbertson		100		Wis		100		N. Dak
Glasgow		100		Minn	100			
Nashua		100			75	25		
Saco		100		Minn	40	60		Minn
YELLOWSTONE CO.								
Billings		100		Minn				
Columbus		100		N. Y.	100			
Park City	75	25						

STATEMENT SHOWING PROPORTIONATE SALES—Continued.

COUNTY AND TOWNS.	EGGS.				From what states "Imported" product prin- cipally ob- tained.
	Per cent of Montana sold.....	Per Cent of Import. ed sold.....	Per cent increased sale Montana product...	Per cent decreased sale Montana product	
BEAVERHEAD CO.					
Bannack	100	50			Ken.; Utah; Minn..
Dillon	100				
Jackson	100				
BROADWATER CO.					
Canton	100				
Radersburg	100				
CARBON CO.					
Bridger	50	50			Neb.
Gebo	95	5			Neb.
Red Lodge	10	90			Minn.
Roberts	60	40			Utah.
Rockvale	100				
CASCADE CO.					
Belt	75	25			Minn.
Great Falls	25	75			
Sand Coulee	25	75			Minn.; Dak.
CHOTEAU CO.					
Chinook	50	50			Minn.
Ft. Benton	40	60			East.
CUSTER CO.					
Ekaleka	100				
Stacey	100				
DEER LODGE CO.					
Deer Lodge	90	10			Kan.
Elliston	75	25			Mont.; Idaho ..
Ovando	100				
Pioneer	50	50			
FERGUS CO.					
Judith	100				
Lavina	100	100			
Lewistown	100				
Stanford	100				
FLATHEAD CO.					
Kaliispell	60	40	25		
Marston	100				
GALLATEN CO.					
Belgrade	100				
Boseman	75	25			Utah.
Logan	100				
Manhattan	100				
GRANITE CO.					
Drummond	90	10			
Garnet	90	10			Minn.; Neb.
Granite	1	99			Minn.; Neb.; Wis. .
JEFFERSON CO.					
Boulder	25	75			
Whitehall	95	5			
LEWIS & CLARKE CO.					
East Helena	50	50			
Helena	5	95			Kan.; Neb.; Ut.; Minn.
Marysville	10	90			Idaho.

SEVENTH ANNUAL REPORT OF BUREAU

STATEMENT SHOWING PROPORTIONATE SALES—Continued.

COUNTY AND TOWNS.	EGGS.				From what states "Imported" product prin- cipally ob- tained.
	Per cent of Montana sold.....	Per cent of imported sold.....	Per cent increased sale Montana product..	Per cent decreased sale Montana product	
MADISON CO.					
Rochester	10	30			Utah
Sheridan	100				
Twin Bridges	75	25			
MISSOULA CO.					
Bonita	25	75			Neb.
Plains	100				
Thompson Falls	10	90			N. D.
PARK CO.					
Jardine	10	90			Minn.
RAVALLI CO.					
Corvallis	100				
Grantdale					
Hamilton	90	10			
Stevensville	100				
SILVER BOW CO.					
Butte	65	35			Kan; NeEb; Ia; Ua.
SWEET GRASS CO.					
Melville	100				
TETON CO.					
Shelby		100			
VALLEY CO.					
Culbertson	10	90			N. D.
Glasgow	25	75			Minn.
Nashua		100			
Saco	75	25			Minn.
YELLOWSTONE CO.					
Billings	10	90			Neb.
Columbus	75	25			Dak.
Park City	100				

STATEMENT SHOWING BY COUNTIES THE REAL ESTATE TRANSFERS MADE BY ADMINISTRATORS, GUARDIANS AND OTHERS; REAL ESTATE MORTGAGES AND SATISFACTIONS; CHATTLE MORTGAGES AND MORTGAGES ON OTHERS; DURING THE CALENDAR YEAR 1904, AS REPORTED BY COUNTY CLERKS.

COUNTIES	Warranty Quit Claim Bargain and Sale and Mining Deeds Recorded		Executors, Administrators and Guardians Deeds Recorded		Sheriff's Deeds Recorded		Tax Title Deeds Recorded		Total Real Estate Transfers Recorded During the Year		U S Patents Recorded	
	No	Amount	No	Amount	No	Amount	No	Amount	No	Amount	Mineral	Agri-cult'l
Beaverhead	252	\$238,392.62	3	\$4,275.00	3	\$5,000.75	1	\$600.00	270	\$251,266.39	9	34
Broadwater	167	146,169.00	1	212.00	3	3,239.00	1	64.00	162	146,065.00	5	15
Carbon	174	153,107.00							174	153,107.00	3	10
Cascade	809	1,009,726.00	11	7,634.40	15	60,731.23	5	3,638.01	629	1,081,466.63	9	181
Chouteau	277	140,658.00			2	4,273.00			280	154,338.00	2	67
Custer	136	1,309,025.27	5	1,127.00	2	1,475.75	1	4.93	204	1,971,038.05	4	41
Dawson	115	2,064,747.24			7	780.00			118	2,065,447.24	1	1
Deer Lodge	639	732,691.35	2	6,867.50	7	55,714.00			644	794,573.34	7	41
Fergus	405	442,390.00	2	1,100.00	5	5,499.00	1	5.00	608	469,154.00		157
Flathead	478	297,289.96	4	1,300.00	16	24,364.13			488	317,673.96	119	
Gallatin	443	438,903.09	9	9,847.00	6	4,384.53	7	70.23	462	453,712.84	67	
Granite	205	406,429.65	4	5,498.00	5	49,114.38			211	453,443.08	23	23
Jefferson	697		15		21				646		12	10
Lewis and Clarke	434	9,535,569.82	14	6,401.13	44	250,451.18	2	106.31	494	9,822,098.34	18	23
Madison	560	286,873.90	2	705.00	9	13,499.00			562	294,177.00	16	32
Meagher	115	167,362.46	1	3,800.00	7	16,965.45	2	895.95	126	180,113.46	1	16
Missoula	411	211,176.19	24	20,453.00	7	5,864.01	3	191.00	455	227,663.21	2	12
Park	246	213,001.89	6	6,065.00	10	7,864.43	4	254.52	258	227,525.33	6	20
Butte	314	212,967.00	9	8,440.00	6	3,945.00	17	394.00	346	225,766.00		41
Butte	1728	5,692,593.46	15	13,949.00	16	43,214.10	10	103.14	1774	5,746,715.70	13	1
Silver Bow	103	91,702.01	5	7,595.19	2	26,728.37			111	116,088.28	24	24
Sweet Grass	131	86,093.85	2	410.00	2	9,230.00			135	86,323.85	23	23
Teton	43	14,554.16							43	14,554.16		
Valley	24	180,707.83	4	973.40	7	10,249.41	7	75.34	259	202,009.00		25
Yellowstone												
Total	8667	\$24,840,045.06	157	\$106,264.43	197	\$655,137.30	63	\$6,357.34	9404	\$25,696,324.72	25	390

STATEMENT SHOWING BY COUNTIES THE REAL ESTATE TRANSFERS MADE IN 1898—Continued.

COUNTIES	Real Estate Mortgages Recorded		Satisfactions Entered		Chattel Mortgages		Mechanics Lien		Total Real Estate and Chattel Mortgages Filed and Recorded		Per Ct. of Total No of Real Est. and Ch'tle Mortg's Re-co'd and filed by each County	Per ct. of total Amt. inv'sted in all Mortgages filed by each County
	No	Amount	No	Am't	No	Am't	No	Am't	No	Am't		
Beaverhead	49	\$74,114 80	13	\$7,486 00	75	\$32,504 23	29	\$62,523 03	117	\$197,631 09	1.56	1.46
Broadwater	43	129,097 00	27	26,576 00	34	120,622 00	8	193,770 00	134	340,719 00	1.63	2.23
Carbon	51	122,720 00	29	10,270 00	346	420,108 00	7	780 00	139	523,228 00	5.25	6.23
Cascade	394	821,894 00	171	64,127 00	323	317,837 33	13	1,549 26	487	889,021 33	3.51	6.13
Chouteau	66	56,972 00	33	21,608 00	140	252,937 00	2	323 00	281	513,029 00	2.74	2.80
Custer	86	30,626 74	394	41,997 29	264	445,131 17	30	41,997 29	341	646,767 21	4.66	5.06
Dawson	15	7,876 00	16	7,614 88	69	342,523 44	1	89 32	104	250,423 44	1.29	2.31
Deer Lodge	344	442,550 19	273	271,955 30	187	108,712 29	86	35,899 86	641	650,968 48	7.23	5.09
Fergus	168	323,623 00	104	190,798 00	247	434,336 00	20	6,666 00	496	747,825 00	5.46	6.81
Flathead	17	132,022 02	205	150,009 24	129	76,084 61	21	5,626 46	250	126,108 03	4.87	1.22
Gallatin	16	182,528 39	110	100,000 00	267	252,237 15	7	1,008 40	317	446,726 77	6.91	4.13
Granite	89	35,564 21	...	21,177 86	67	33,743 49	36	4,668 08	105	123,307 72	1.40	1.28
Jefferson	67	32,550 21	64	46,089 60	52	40,600 61	67	10,254 71	159	123,000 24	2.00	1.14
Lewis and Clark	166	1,627,422 26	131	469,237 00	169	220,643 20	23	6,621 13	321	1,813,064 53	4.43	17.09
Madison	102	97,296 00	89	84,105 00	143	128,390 00	13	1,239 95	245	255,286 00	3.26	2.64
Meagher	36	106,461 90	103	...	228	283,478 74	2	1,239 95	109	268,500 34	1.40	2.53
Missoula	123	159,531 90	163	106,434 21	143	157,964 82	2	200 00	265	317,496 48	2.54	2.62
Park	64	51,497 54	381	62,014 59	184	74,865 74	4	1,076 71	128	196,233 23	2.51	1.17
Ravalli	126	99,366 00	129	96,485 00	131	74,915 90	213	117,237 03	357	174,871 00	3.49	1.62
Silver Bow	670	1,209,419 02	808	736,080 59	75	316,900 23	10	3,731 29	1289	1,626,210 34	12.56	15.04
Sweet Grass	63	61,563 41	63	32,669 59	121	253,091 54	16	63 49	239	245,153 56	2.97	2.19
Teton	86	33,123 90	32	49,509 22	170	290,498 26	1	13 65	185	222,661 36	2.47	2.04
Valley	4	1,009 22	2	250 13	24	58,115 03	3	49 91	26	19,114 84	0.25	0.25
Yellowstone	72	167,817 14	73	32,726 86	132	264,214 86	2	49 91	254	372,125 09	2.49	2.46
Total	2996	\$5,840,539 41	434	\$3,079,731 62	4437	\$5,173,728 56	603	\$670,570 25	7423	\$10,814,671 90	100.00	100.00

STATEMENT SHOWING BY COUNTIES THE REAL ESTATE TRANSFERS MADE BY ADMINISTRATORS, GUARDIANS AND OTHERS; REAL ESTATE MORTGAGES AND SATISFACTION S; CHEATEL MORTGAGES AND MORTGAGES LATER FILED, ETC., DURING THE CALENDAR YEAR 1929, AS REPORTED BY COUNTY CLERKS.

COUNTIES.	U.S. Patents Recorded		Total Real Estate Transfers Recorded During the Year...		Tax Title Deeds Recorded		Sheriffs' Deeds Recorded		Executors, Administrators and Guardians Deeds Recorded		Warranty, Quit Claim Bargain and Sale and Mining Deeds Recorded		Agricultural.
	No.	Amount.	No.	Amount.	No.	Amount.	No.	Amount.	No.	Amount.	No.	Amount.	
Beaverhead	253	\$225,390 00	253	\$1,402 39	2	17,011 00	1	\$900 00	1	\$22,823 00	150	\$20,360 00	26
Broadwater	123	251,570 00	123	1,210 00	1	17,011 00	2	1,210 00	2	20,360 00	180	75,085 00	28
Carbon	208	75,085 00	208	1,210 00	1	17,011 00	1	1,210 00	1	20,360 00	180	75,085 00	28
Cascade	423	590,321 44	423	590,321 44	10	1,210 00	10	1,210 00	10	20,360 00	180	75,085 00	183
Chouteau	232	223,567 00	232	223,567 00	1	1,210 00	1	1,210 00	1	20,360 00	180	75,085 00	95
Custer	242	141,269 11	242	141,269 11	1	1,210 00	1	1,210 00	1	20,360 00	180	75,085 00	54
Dawson	59	30,670 15	59	30,670 15	1	1,210 00	1	1,210 00	1	20,360 00	180	75,085 00	4
Deer Lodge	654	674,239 96	654	674,239 96	1	1,210 00	1	1,210 00	1	20,360 00	180	75,085 00	20
Fergus	654	674,239 96	654	674,239 96	1	1,210 00	1	1,210 00	1	20,360 00	180	75,085 00	171
Flathead	289	333,023 94	289	333,023 94	1	1,210 00	1	1,210 00	1	20,360 00	180	75,085 00	113
Gallatin	124	160,313 23	124	160,313 23	1	1,210 00	1	1,210 00	1	20,360 00	180	75,085 00	43
Granite	445	1,151,877 19	445	1,151,877 19	1	1,210 00	1	1,210 00	1	20,360 00	180	75,085 00	12
Jefferson	683	1,151,877 19	683	1,151,877 19	1	1,210 00	1	1,210 00	1	20,360 00	180	75,085 00	16
Levi and Clark	694	285,000 00	694	285,000 00	1	1,210 00	1	1,210 00	1	20,360 00	180	75,085 00	29
Madison	114	285,000 00	114	285,000 00	1	1,210 00	1	1,210 00	1	20,360 00	180	75,085 00	26
Meagher	770	605,139 45	770	605,139 45	1	1,210 00	1	1,210 00	1	20,360 00	180	75,085 00	22
Missoula	280	605,139 45	280	605,139 45	1	1,210 00	1	1,210 00	1	20,360 00	180	75,085 00	23
Park	360	605,139 45	360	605,139 45	1	1,210 00	1	1,210 00	1	20,360 00	180	75,085 00	27
Flat	360	605,139 45	360	605,139 45	1	1,210 00	1	1,210 00	1	20,360 00	180	75,085 00	74
Revel	1672	2,690,255 28	1672	2,690,255 28	1	1,210 00	1	1,210 00	1	20,360 00	180	75,085 00	1
Silver Bow	141	160,313 23	141	160,313 23	1	1,210 00	1	1,210 00	1	20,360 00	180	75,085 00	95
Sweet Grass	302	70,704 31	302	70,704 31	1	1,210 00	1	1,210 00	1	20,360 00	180	75,085 00	25
Teton	445	20,000 00	445	20,000 00	1	1,210 00	1	1,210 00	1	20,360 00	180	75,085 00	11
Valley	445	20,000 00	445	20,000 00	1	1,210 00	1	1,210 00	1	20,360 00	180	75,085 00	13
Yellowstone	1672	2,690,255 28	1672	2,690,255 28	1	1,210 00	1	1,210 00	1	20,360 00	180	75,085 00	131
Total..	9718	\$15,168,013 26	9718	\$15,168,013 26	157	\$1,402 39	157	\$1,402 39	157	\$1,402 39	157	\$1,402 39	157

STATEMENT SHOWING BY COUNTIES THE REAL ESTATE TRANSFERS MADE IN 1899—Continued.

COUNTIES.	Real Estate Mortgages Recorded		Satisfactions Entered.		Pr ct of No. of mtgs satisfied in Co as compared with mtgs recorded during year.		Chattel Mortgages Filed		Mechanic's Liens Filed		Total Real Estate and Chattel Mortgages Filed and Recorded		Pr ct of total No. of real estate and chattel mtgs rec and filed by each County		Per Cent. of Total Amount Invested in all Mortgages Filed by Each County	
	No.	Amount.	No.	Amount.	No.	Amount.	No.	Amount.	No.	Amount.	No.	Amount.	No.	Amount.	No.	Amount.
Beaverhead	39	\$21,300 00	18	\$23,736 00	63.32	\$33,154 86	104	\$33,154 86	20	\$12,191 00	134	\$146,454 86	1.00	1.36	1.00	1.36
Broadwater	29	43,197 00	32	62,134 00	82.06	39,421 00	61	39,421 00	2	190 00	100	87,619 00	1.17	1.80	1.17	1.80
Carbon	67	32,646 00	27	16,374 00	49.39	331,039 00	480	331,039 00	33	6,679 00	547	371,123 00	6.54	3.23	6.54	3.23
Cascade	264	230,366 64	227	632,930 35	85.98	347,145 33	451	347,145 33	5	1,201 05	715	677,543 87	8.96	6.17	8.96	6.17
Chouteau	66	78,190 00	40	52,283 00	71.43	313,515 23	138	313,515 23	3	145 00	194	296,705 00	2.22	3.61	2.22	3.61
Custer	47	72,679 53	26	18,162 42	55.32	194,210 99	333	194,210 99	3	186 46	280	576,890 23	4.65	5.85	4.65	5.85
Dawson	33	20,174 34	10	6,403 00	30.30	134,254 64	114	134,254 64	6	1,442 29	147	154,728 96	1.76	1.41	1.76	1.41
Deer Lodge	235	329,223 31	280	295,402 22	109.30	108,781 92	395	108,781 92	48	20,247 97	440	434,965 70	6.53	3.94	6.53	3.94
Fergus	196	364,017 00	100	191,823 00	60.61	618,265 00	349	618,265 00	17	2,212 00	514	380,343 00	6.15	3.23	6.15	3.23
Flathead	124	146,674 19	156	100,073 55	89.00	129,417 24	218	129,417 24	29	2,728 69	412	316,091 53	4.94	2.38	4.94	2.38
Gallatin	229	679,731 06	114	350,000 00	49.73	167,658 27	341	167,658 27	6	14,321 06	740	747,419 23	8.36	6.40	8.36	6.40
Granite	29	29,671 02	33	24,701 90	117.86	51,458 25	47	51,458 25	4	603 62	95	81,089 37	1.14	1.74	1.14	1.74
Jefferson	40	31,248 00	42	20,628 57	107.50	29,724 26	107	29,724 26	17	2,359 49	107	70,953 58	1.29	1.44	1.29	1.44
Lewis and Clarke	83	1,329,083 62	228	490,177 08	245.16	131,538 98	131	131,538 98	6	604 76	224	1,720,630 53	2.69	16.31	2.69	16.31
Madison	103	115,652 80	63	81,146 00	69.55	173,181 00	111	173,181 00	11	1,726 00	243	290,733 00	2.09	2.65	2.09	2.65
Monaghan	18	97,351 51	37	81,146 00	305.55	231,260 57	51	231,260 57	5	613 89	99	253,525 13	1.53	2.30	1.53	2.30
Missoula	176	182,561 35	212	277,449 70	131.02	108,662 23	131	108,662 23	16	42,113 63	297	259,134 48	2.80	1.43	2.80	1.43
Park	52	75,725 00	61	164,373 51	73.50	108,768 32	156	108,768 32	3	497 73	239	179,491 52	2.97	1.49	2.97	1.49
Ravalli	146	100,729 00	173	104,545 00	130.69	74,900 00	163	74,900 00	...	...	268	176,581 00	20.00	13.00	20.00	13.00
Silver Bow	637	1,064,351 73	572	1,785,123 89	82.26	533,611 29	961	533,611 29	32	25,821 45	3678	1,417,963 04	3.70	3.89	3.70	3.89
Sweet Grass	60	90,723 86	43	63,728 96	86.00	336,009 07	4	336,009 07	3	612 28	230	427,623 93	2.70	2.70	2.70	2.70
Teton	62	125,942 35	31	102,197 44	49.21	360,361 21	170	360,361 21	3	612 28	233	606,794 10	2.70	4.40	2.70	4.40
Valley	12	7,773 37	2	4,109 22	16.96	76,888 70	44	76,888 70	...	...	56	84,997 07	1.67	1.77	1.67	1.77
Yellowstone	100	215,666 70	78	106,144 82	78.00	298,213 69	195	298,213 69	13	1,672 06	295	601,775 36	2.83	4.57	2.83	4.57
Total	2978	\$5,826,358 23	2007	\$4,734,664 77	81.26	\$5,165,343 66	5300	\$5,165,343 66	238	\$146,367 26	8357	\$10,596,722 31	100.00	100.00	100.00	100.00

STATEMENT SHOWING RECEIPTS AND EXPENDITURES DURING THE FISCAL YEAR ENDING NOVEMBER 30, 1899 AND 1900, AS REPORTED BY THE STATE TREASURER.

FUND	RECEIPTS.			DISBURSEMENTS.		
	Balance on hand Dec. 1, 1898.....	Received during year ending Nov. 30, 1899.....	Total.....	Disbursed during the year ending Nov. 30, 1899.....	Disbursed during the year ending Nov. 30, 1900.....	Total.....
Permanent School	\$27,179 19	\$241,700 15	\$268,879 34	\$107,565 85	\$152,000 40	\$259,565 25
School Income	7,023 05	50,880 80	57,903 85	97,406 53	97,406 53	194,813 06
State Normal School	16,385 72	7,319 94	23,705 66	6,108 48	19,957 74	26,066 22
Permanent University	7,444 45	15,931 23	23,375 68	5,034 85	21,265 18	26,300 03
Normal School Board	2,216 89	51,817 85	54,034 74	4,737 71	32,444 96	37,182 67
Agricultural College Board	2,144 50	49,229 61	51,374 11	5,118 57	1,150 81	6,269 38
Deaf and Dumb Asylum Building	13,575 11	281,440 22	295,015 33	51,290 43	1,473 75	52,764 18
Reform School Building	1,352 89	6,796 72	8,149 61	82,128 71	37,313 67	119,442 38
State Capitol Building	2 70	571,460 22	571,462 92	1,380 96	64,016 49	65,397 45
General	11,383 27	19,687 23	31,070 50	524,686 21	18,043 00	542,729 21
Stock Inspector and Detective	8,763 14	4,523 80	13,286 94	14,900 00	15,043 00	30,943 00
Stock Indemnity	4,531 13	2,826 27	7,357 40	4,444 00	3,116 00	7,560 00
Sheep Inspector and Indemnity	9,439 46	97,382 40	106,821 86	3,086 74	2,689 70	5,776 44
State Bounty	644 86	122 50	767 36	21,376 00	145,746 50	167,122 50
Fish and Game	2,632 10	1,394 06	4,026 16	483 08	276 41	759 49
University Library	50 34	479 10	529 44	3,680 15	1,900 86	5,581 01
State Law Library	89 70	170 00	259 70	418 25	287 02	705 27
Medical Board	50 70	170 00	220 70	463 35	669 15	1,132 50
State Examiner's	7,101 06	3,850 00	10,951 06	2,675 00	7,053 76	9,728 76
Sequestered Estates	.....	231 15	231 15	1,306 48	1,087 87	2,394 35
Soldiers' Home	.....	4,144 99	4,144 99	3,771 88	5,053 47	8,825 35
Capitol Building Interest and Sinking	.....	6,599 23	6,599 23	4,887 23	2,023 00	6,910 23
Beautifying State Capitol Grounds	.....	6 25	6 25	.....	2,500 00	2,500 00
University Building	3,235 75	44 40	3,280 15	25,635 23	19 80	25,655 03
Agricultural College Income	.....	7,533 05	7,533 05	1,161 58	21 00	1,182 58
Agricultural College from United States	.....	25,000 00	25,000 00	1,161 58	.....	1,161 58
Horicultural Board	.....	500 00	500 00	.....	.....	.....
Arid Land District No. 1 Fund "A"	.....	1,205 40	1,205 40	.....	.....	.....
Trans-Mississippi Exposition	5 34	1,068 59	1,073 93	25,000 00	25,000 00	50,000 00
Arid Land District No. 2 Fund "A"	.....	1,068 59	1,068 59	.....	643 90	643 90
Total	\$256,719 90	\$2,478,700 34	\$2,735,419 24	\$1,054,006 80	\$1,235,723 00	\$2,289,730 80

The following state institutions have issued bonds secured by the several land grants:

State Agricultural College, dated July 1, 1886, 10-25 years, 6 per cent	\$100,000
State Normal School, dated July 1, 1886, 10-25 years, 6 per cent	50,000
State University, dated July 1, 1897, 20-30 years, 6 per cent	100,000
Deaf and Dumb Asylum, dated July 1, 1897, 15-30 years, 6 per cent	40,000
State Capitol Building, dated July 1, 1888, 15-30 years, 6 per cent	350,000
State School of Mines, dated July 1, 1900, 15-30 years, 8 per cent	120,000

Total

Note.—The state is not responsible for the interest or principal of the above mentioned bonds. Nor is it liable for warrants or the interest on warrants issued by the state institutions, of which there is outstanding, principal and interest, \$106,432.34. The amount of warrants outstanding against the General Fund of the State is \$243,970.07; interest on same \$3,500.00. Total, \$247,470.07.

FINANCES OF THE COUNTIES.

The Financial Condition of the Counties of the State for the Fiscal Year Ending Nov. 30, 1899.

BEAVERHEAD COUNTY.

	General Fund..	Contingent Fund	Road and Bridge Fund.	Poor Fund	Institute Fund	Bond, Interest and Sinking Fund	Bonds, 6 Per Cent...	Bonds, 7 Per Cent....	Bonds, 5 Per Cent....	Total.....
Gross Indebtedness December 1, 1898, (being all unpaid Warrants and Bonds and accrued interest on the same)	\$6,311 48	\$1,857	13,813 88	\$3,087 54	.....	\$1,854 29	\$40,000 00	\$20,000 00	.....	\$130,023 30
Warrants issued during fiscal year ending Nov. 30, 1899	7,928 73	20,518 26	14,604 40	7,069 70	.....	.....	.....	.....	.....	60,476 14
Bonds issued during fiscal year ending Nov. 30, 1899 .....	.....	.....	.....	.....	.....	.....	.....	.....	\$20,000 00	20,000 00
Bond and Warrant interest accruing year ending Nov. 30, 1899	9 15	104 50	494 98	100 50	.....	2,330 40	.....	.....	.....	2,029 87
Total	\$14,303 41	\$24,479 56	\$28,813 15	\$10,253 14	.....	\$4,174 69	\$40,000 00	\$20,000 00	\$20,000 00	\$412,583 21
Warrants paid and cancelled during fiscal year ending Nov. 30, 1899	\$7,680 78	22,710 10	\$10,778 97	\$4,538 78	.....	.....	.....	.....	.....	45,753 63
Bonds paid during fiscal year ending Nov. 30, 1899 .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	20,000 00
Bond and Warrant interest paid during fiscal year ending Nov. 30, 1899	9 15	104 50	494 02	100 50	.....	2,330 40	.....	.....	.....	2,029 87
Total	\$7,689 93	\$23,814 60	\$11,267 99	\$4,639 28	.....	\$2,330 40	.....	.....	.....	\$65,783 50
Gross debt Nov. 30, 1899	\$6,313 48	2,062 56	\$17,084 29	\$3,583 40	.....	1,854 29	\$40,000 00	.....	\$20,000 00	\$113,786 21
Money in Treasury on Nov. 30, 1899	\$7,597 69	704 24	14,263 58	1,554 59	.....	1,230 74	.....	.....	.....	\$6,571 85
Net balance Nov. 30, 1899	\$90,384 12	\$1,391 05	\$1,400 61	\$4,023 87	\$41 00	\$23 52	\$20,000 00	.....	.....	\$23,413 91
Net balance at end of previous fiscal year	\$12,421 17	\$2,580 90	\$1,564 65	1,088 57	\$2 80	1,723 63	\$0,000 00	\$20,000 00	.....	\$9,853 27
Decrease in net indebtedness .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	\$23,428 21

* Denote credits.

BROADWATER COUNTY.

	General Fund..	Contingent Fund	Road and Bridge Fund.	Poor Fund	Bond, Interest and Sinking Fund	Bonds, 6 Per Cent...	Total.....
Gross Indebtedness December 1, 1898, (being unpaid Warrants and Bonds and accrued interest on the same)	\$219 25	\$18,947 25	\$5,000 47	\$1,343 31	\$880 00	\$92,000 00	\$99,540 85
Warrants issued during fiscal year ending Nov. 30, 1899	6,334 96	16,238 00	5,933 54	2,797 34	.....	.....	\$1,377 53
Bond and Warrant interest accruing year ending Nov. 30, 1899 .....	.....	608 97	215 98	45 96	2,700 00	.....	2,660 94
Total	\$6,744 21	\$24,943 90	\$14,144 99	\$4,139 64	\$2,730 00	\$92,000 00	\$125,762 43
Warrants paid and cancelled during fiscal year ending Nov. 30, 1899	6,300 24	16,899 72	5,885 33	2,346 42	.....	.....	\$5,372 30
Bond and Warrant interest paid during fiscal year ending Nov. 30, 1899 .....	.....	608 97	215 98	48 99	2,720 00	.....	4,283 94
Total	\$6,300 24	\$17,508 69	\$6,043 30	\$2,394 41	\$2,720 00	.....	\$29,966 14
Gross debt Nov. 30, 1899	544 57	\$2,434 20	\$1,143 19	1,705 23	.....	68,000 00	\$5,816 23
Money in Treasury on Nov. 30, 1899	11,685 31	11,685 31	6,739 45	2,355 00	.....	.....	\$3,774 55
Net balances at end of previous fiscal year	\$11,440 21	\$11,743 97	\$1,391 74	\$730 05	.....	\$92,000 00	\$23,139 25
Net balances at end of previous fiscal year	\$4,036 47	\$4,108 23	\$1,168 96	\$6 56	.....	62,000 00	\$7,277 23
Decrease in net indebtedness .....	.....	.....	.....	.....	.....	.....	\$13,160 36

* Denote credits.

CARBON COUNTY.

[illegible]

* Denote credits.

CASCADE COUNTY.

	General Fund..	Contingent Fund	Road Fund.....	Poor Fund	Bridge Fund....	Institute Fund	Bond, Interest and Sinking Fund	Bonds, 6 Per Cent...	Bonds, 7 Per Cent....	Total.....
Gross Indebtedness December 1, 1899, (including all unpaid Warrants and Bonds and accrued interest on the same)	\$739 29	\$670 81	\$268 97	\$193 91	.....	.....	\$0,722 43	\$225,943 19	\$135,776 00	\$373,434 60
Warrants issued during fiscal year ending Nov. 30, 1899	40,699 71	42,525 60	30,256 24	12,988 47	.....	5 00	.....	.....	.....	124,268 02
Bond and Warrant interest accruing year ending Nov. 30, 1899 .....	.....	.....	.....	.....	.....	.....	22,571 15	.....	.....	22,571 15
Total	\$41,299 00	\$49,196 41	\$30,754 21	\$12,913 38	.....	5 00	\$22,571 15	\$225,943 19	\$135,776 00	\$632,677 80
Warrants paid and cancelled during fiscal year ending Nov. 30, 1899	40,699 71	42,525 60	30,256 24	12,988 47	.....	5 00	.....	.....	.....	124,268 02
Bond and Warrant interest paid during fiscal year ending Nov. 30, 1899 .....	.....	.....	.....	.....	.....	.....	22,571 15	.....	.....	22,571 15
Total	\$40,699 71	\$42,525 60	\$30,256 24	\$12,988 47	.....	5 00	\$22,571 15	.....	.....	\$109,689 13
Gross debt Nov. 30, 1899	739 29	670 81	268 97	193 91	.....	.....	.....	.....	.....	1,773 98
Money in Treasury on Nov. 30, 1899	19,699 15	4,611 94	17,256 57	5,669 30	.....	146 25	.....	.....	.....	157,641 90
Net balance Nov. 30, 1899	\$19,699 15	\$4,611 94	\$17,256 57	\$5,669 30	.....	\$146 25	.....	.....	.....	\$225,943 19
Net balance at end of previous fiscal year	\$19,699 15	\$4,611 94	\$17,256 57	\$5,669 30	.....	\$146 25	.....	.....	.....	\$225,943 19
Decrease in net indebtedness .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	\$0,000 00

* Denote credits.

CUSTER COUNTY.

Gross indebtedness December 1, 1898, (being all unpaid Warrants and Bonds and accrued interest on the same)	\$16,823 15	\$4,654 79	\$1,464 16	\$1,419 56	28 00	\$6,850 00	\$274,000 00	\$204,923 70
Warrants issued during fiscal year ending Nov. 30, 1899	25,486 13	15,419 06	9,110 09	4,572 84	1,816 76	.....	.....	56,415 85
Bond and Warrant interest accruing year ending Nov. 30, 1899 .....	.....	.....	19 04	.....	.....	18,440 00	.....	18,450 04
Total	\$42,015 21	\$20,074 46	\$10,583 29	\$5,892 40	\$1,833 76	\$23,290 00	\$274,000 00	\$277,778 60
Warrants paid and cancelled during fiscal year ending Nov. 30, 1899	40,490 97	20,018 20	9,596 69	5,970 18	1,833 76	.....	.....	77,934 69
Bond and Warrant interest paid during fiscal year ending Nov. 30, 1899	299 56	56 25	19 76	23 72	.....	18,440 00	.....	18,605 63
Total	\$40,790 53	\$20,074 46	\$9,616 45	\$5,993 90	\$1,833 76	\$18,440 00	.....	\$94,840 37
Gross debt Nov. 30, 1899	1,000 39	.....	1,033 84	.....	.....	6,850 00	\$74,000 00	352,683 23
Money in Treasury on Nov. 30, 1899	48,675 70	10,354 69	9,515 06	6,329 36	11,010 86	24,303 72	.....	109,391 36
Net balance Nov. 30, 1899	\$47,675 31	\$10,354 69	\$8,481 22	\$6,303 36	\$9,180 86	\$17,453 72	\$74,000 00	173,367 35
Net balance at end of previous fiscal year	\$10,123 81	\$1,979 46	\$3,974 19	\$1,408 84	\$2,188 06	\$6,007 72	\$74,000 00	250,214 39
Decrease in net indebtedness .....	.....	.....	.....	.....	.....	.....	.....	\$76,847 01

* Denote credits.

DEER LODGE COUNTY.

	General Fund..	Contingent Fund	Road Fund.....	Poor Fund	Bridge Fund.	Court House Fund.....	Bond, Interest and Sinking Fund	Bonds, 5 Per Cent...	Total.....
Gross Indebtedness December 1, 1898, (being all unpaid Warrants and Bonds and accrued interest on the same)									
Warrants issued during fiscal year ending Nov. 30, 1899	\$43,348 73	\$2,119 06	\$4,191 27	\$2,575 05	\$0 12			\$200,000 00	\$251,516 13
Bonds issued during fiscal year ending Nov. 30, 1899	44,906 71	40,770 70	36,132 09	20,034 26	4,522 96	66,591 76			194,121 57
Bond and Warrant-interest accruing year ending Nov. 30, 1899							12,942 77	60,000 00	60,000 00
Total	\$87,348 43	\$42,889 76	\$20,324 36	\$22,599 03	\$4,535 08	\$66,591 76	\$14,522 10	\$250,000 00	\$599,650 52
Warrants paid and cancelled during fiscal year ending Nov. 30, 1899	39,553 69	40,615 57	8,841 17	14,631 94	4,322 19	66,591 76			174,526 44
Bond and Warrant interest paid during fiscal year ending Nov. 30, 1899							12,942 77		12,942 77
Total	\$39,553 69	\$40,615 57	\$8,841 17	\$14,631 94	\$4,322 19	\$66,591 76	\$12,942 77		\$198,379 41
Gross debt Nov. 30, 1899	47,795 74	2,273 29	11,543 19	2,575 07	230 39		236 23	250,000 00	253,851 11
Money in Treasury on Nov. 30, 1899	44,137 15		9,363 94	14,946 07	3,946 62	18,125 35	12,741 04		102,510 51
Net balance Nov. 30, 1899	3,658 59	2,273 29	2,179 25	\$4,333 00	\$2,715 73	\$118,160 39	\$124,325 21	\$250,000 00	\$216,360 62
Net balance at end of previous fiscal year	46,798 75	\$1,117 44	\$2,052 75	\$946 57	\$2,462 43	\$13,125 52	\$91,860 62	\$200,000 00	194,353 04
Increase in net indebtedness									\$22,787 56

* Denote credits.

FLATHEAD COUNTY.

	General Fund..	Contingent Fund	Road Fund.....	Poor Fund	Bridge Fund....	Incidental Fund	Refund orders County Fund	Bond, Interest and Sinking Fund	Bonds, 6 Per Cent...	Total.....
Gross Indebtedness December 1, 1899, (being all unpaid Warrants and Bonds and accrued interest on the same)	\$23,849 89	\$3 00	\$31,530 53	\$4 00	\$2,225 53	...	...	...	\$100,000 00	\$162,611 70
Warrants issued during fiscal year ending Nov. 30, 1899	18,321 11	21,878 55	9,125 76	3,271 00	8,467 73	443 89	254 87	...	...	61,827 96
Bond and Warrant interest accruing year ending Nov. 30, 1899	2,295 97	...	1,036 14	...	51 87	...	...	9,000 00	...	9,853 96
Total	\$49,466 97	\$21,880 55	\$43,312 45	\$2,276 00	\$10,724 88	\$445 89	\$294 87	\$9,000 00	\$100,000 00	\$234,813 64
Warrants paid and cancelled during fiscal year ending Nov. 30, 1899	20,237 77	21,880 55	6,321 53	3,275 00	2,973 55	435 29	263 87	...	...	75,024 55
Bond and Warrant interest paid during fiscal year ending Nov. 30, 1899	2,295 97	...	1,036 14	...	51 87	...	...	5,850 00	...	9,713 96
Total	\$41,533 74	\$21,880 55	\$5,447 66	\$3,275 00	\$3,000 43	\$435 29	\$263 87	\$5,850 00	...	\$64,728 53
Gross debt Nov. 30, 1899	7,943 23	...	32,794 20	...	...	19 80	2 00	159 00	100,000 00	149,575 11
Money in Treasury on Nov. 30, 1899	32,643 26	9,807 47	6,535 53	5,103 59	2,799 91	144 76	...	5,864 87	...	64,879 33
Net balance Nov. 30, 1899	\$24,700 02	\$9,807 47	\$26,258 24	\$23,033 59	\$3,814 55	\$213 15	\$3 00	\$23,714 87	\$100,000 00	\$94,585 59
Net balance at end of previous fiscal year	3,525 61	\$7,764 45	\$6,964 25	\$5,015 24	...	\$73 04	...	\$4,023 49	100,000 00	112,044 53
Decrease in net indebtedness	...	...	...	...	...	...	...	...	...	\$57,449 02

* Denote credits.

FERGUS COUNTY.

	General Fund..	Contingent Fund	Road Fund.....	Poor Fund	County High School Fund	Institute Fund	Bond, Interest and Sinking Fund	Bonds, 6 Per Cent...	Total.....
Gross Indebtedness December 1, 1892, (being all unpaid Warrants and Bonds and accrued interest on the same)	\$130 14	\$212 46	\$5,746 57	\$13 00	.....	.....	\$2,575 00	\$100,000 00	\$111,578 16
Warrants issued during fiscal year ending Nov. 30, 1899	21,560 85	18,065 16	20,037 77	6,300 25	.....	60 00	.....	.....	64,023 12
Bond and Warrant interest accruing year ending Nov. 30, 1899 .....	.....	.....	17 21	.....	.....	.....	6,000 30	.....	6,078 21
Total	\$21,790 99	\$18,277 61	\$25,801 65	\$6,314 25	.....	\$60 00	\$6,065 30	\$100,000 00	\$182,777 40
Warrants paid and cancelled during fiscal year ending Nov. 30, 1899	\$1,764 44	18,125 12	25,513 58	6,171 35	.....	60 00	.....	.....	71,653 89
Bond and Warrant interest paid during fiscal year ending Nov. 30, 1899 .....	.....	.....	179 51	.....	.....	.....	6,060 30	.....	6,240 51
Total	\$21,794 44	\$18,125 12	\$25,693 10	\$6,171 35	.....	\$60 00	\$6,060 30	.....	\$77,394 40
Gross debt Nov. 30, 1899	18 25	148 58	168 48	40 40	.....	.....	2,575 00	100,000 00	105,823 51
Money in Treasury on Nov. 30, 1899	27,465 71	25,010 05	10,123 76	7,855 18	2,284 77	2 00	7,678 73	.....	78,443 20
Net balance Nov. 30, 1899	\$27,479 16	\$25,027 93	\$10,045 30	\$7,765 78	\$2,284 77	\$2 00	\$5,103 73	\$102,000 00	\$27,449 71
Net balance at end of previous fiscal year	\$13,165 01	\$7,758 50	1,943 77	6,317 35	.....	\$14,008 00	\$213 70	\$1,900 77	\$101,289 90
Decrease in net indebtedness .....	.....	.....	.....	.....	.....	.....	.....	.....	\$44,908 71

• Denote credits.

GRANITE COUNTY.

	General Fund..	Contingent Fund	Road Fund.....	Poor Fund	Bridge Fund.	Total.....
Gross indebtedness December 1, 1898, (being all unpaid Warrants and accrued interest on the same) ..	\$27,673 86	\$2,068 03	\$2,371 78	\$390 22	.....	\$113,028 95
Warrants issued during fiscal year ending Nov. 30, 1899	12,053 60	15,393 34	11,057 73	4,394 53	4,005 00	60,904 22
Warrant interest accruing year ending Nov. 30, 1899 ..	7,000 00	.....	896 47	20 00	363 53	8,170 00
Total	\$116,748 66	\$20,381 37	\$24,319 98	\$5,194 80	\$4,998 53	\$171,653 22
Warrants paid and cancelled during fiscal year ending Nov. 30, 1899	12,367 56	21,473 60	4,673 39	4,007 41	.....	42,530 90
Money in Treasury on Nov. 30, 1899	4,360 20	58 60	2323 26	44 93	.....	4,673 26
Warrant interest paid during fiscal year ending Nov. 30, 1899 ..	.....	.....	.....	.....	.....	.....
Total	\$16,655 76	\$21,609 20	\$4,905 75	\$4,053 33	.....	\$47,193 15
Gross debt Nov. 30, 1899	100,106 76	.....	19,239 23	1,143 47	4,993 53	124,379 07
Money in Treasury on Nov. 30, 1899	5,028 17	.....	4,521 03	828 71	2,127 76	21,010 17
Net balance Nov. 30, 1899	\$95,078 59	.....	\$14,698 00	\$13 76	\$2,865 77	\$102,309 90
Net balances at end of previous year	85,156 08	.....	11,309 77	525 15	790 00	104,661 02
Decrease in Net Indebtedness .....	.....	.....	.....	.....	.....	\$1,351 02

* Denote credits.

GAYLATTIN COUNTY.

	General Fund..	Contingent Fund	Road Fund.....	Poor Fund	Bridge Fund....	Bond, Interest and Sinking Fund	Bonds, 6 Per Cent...	Bonds, 4 1/2 Per Cent..	Total.....
Gross Indebtedness December 1, 1896, (being all unpaid Warrants and Bonds and accrued interest on the same)	\$229 81	\$23,904 71	\$40,021 00	\$6 10	\$22,476 34	.....	\$35,000 00	.....	\$221,338 05
Warrants issued during fiscal year ending Nov. 30, 1899	19,634 55	21,533 53	12,896 50	4,346 03	7,070 99	.....	.....	.....	65,345 95
Bonds issued during fiscal year ending Nov. 30, 1899 .....	.....	.....	.....	.....	.....	.....	.....	137,000 00	137,000 00
Bond and Warrant interest accruing year ending Nov. 30, 1899	00	2,475 23	9,822 28	.....	8,064 69	5,714 34	.....	.....	25,313 30
Total	\$19,915 02	\$20,113 23	\$52,899 77	\$4,352 13	\$30,541 02	\$6,714 34	\$35,000 00	\$137,000 00	\$448,801 99
Warrants paid and cancelled during fiscal year ending Nov. 30, 1899	19,707 73	\$4,851 46	\$6,704 03	4,346 03	20,320 13	.....	.....	.....	137,239 38
Bond and Warrant interest paid during fiscal year ending Nov. 30, 1899	00	2,475 23	9,822 28	.....	8,064 69	6,714 34	.....	.....	25,313 30
Total	\$19,708 23	\$7,326 69	\$16,526 31	\$4,346 03	\$28,384 82	\$6,714 34	.....	.....	\$112,535 43
Gross Debt Nov. 30, 1899	298 05	681 93	4,153 51	5 59	6 30	.....	95,000 00	137,000 00	227,603 47
Money in Treasury on Nov. 30, 1899	31,653 07	17,343 53	14,651 95	2,196 13	6,783 23	14,149 35	.....	.....	59,789 41
Net balance Nov. 30, 1899	\$21,455 44	\$46,656 86	\$21,238 44	\$2,190 58	\$4,177 07	\$24,143 35	\$95,000 00	\$137,000 00	\$147,377 96
Net balance at end of previous fiscal year	\$71,068 08	\$2,443 31	\$1,307 53	\$5,430 71	\$7,721 09	\$5,777 79	\$5,000 00	.....	178,989 58
Decrease in net indebtedness .....	.....	.....	.....	.....	.....	.....	.....	.....	\$21,612 56

* Denote credits.

JEFFERSON COUNTY.

	General Fund..	Contingent Fund	Road Fund	Poor Fund	Bridge Fund....	Broadwater County Fund.....	Bond, Interest and Sinking Fund	Bonds, 6 Per Cent...	Bonds, 4½ Per Cent.....	Total.....
Gross Indebtedness December 1, 1898, (being all unpaid Warrants and Bonds and accrued interest on the same)										
Warrants issued during fiscal year ending Nov. 30, 1899	\$50 90	\$1,223 46	\$209 35	\$25 50				\$150,000 00		\$151,692 30
Bonds issued during fiscal year ending Nov. 30, 1899	8,576 47	15,060 58	13,539 42	4,377 90		\$23 41				44,306 53
Bond and Warrant interest accruing year ending Nov. 30, 1899							7,351 76		75,000 00	75,000 00
Total	\$8,627 37	\$13,373 03	\$13,538 77	\$4,393 30		\$23 41	\$7,351 76	\$150,000 00	\$75,000 00	\$239,235 44
Warrants paid and cancelled during fiscal year ending Nov. 30, 1899	3,604 87	13,373 03	13,533 97	4,364 30		\$23 41				47,698 58
Bonds paid during fiscal year ending Nov. 30, 1899								80,000 00		80,000 00
Bond and Warrant interest paid during fiscal year ending Nov. 30, 1899							7,351 76			7,351 76
Total	\$3,604 87	\$13,373 03	\$13,533 97	\$4,364 30		\$23 41	\$7,351 76	\$80,000 00		\$144,960 24
Gross debt Nov. 30, 1899	22 50		304 30	39 00				80,000 00		126,396 30
Money in Treasury on Nov. 30, 1899	13,213 90	17,051 71	8,107 43	1,497 55	3,421 23		386 27			43,697 27
Net balance Nov. 30, 1899	\$13,190 40	\$17,051 71	\$7,982 03	\$1,418 55	\$3,421 23		\$386 27	\$80,000 00	\$75,000 00	\$231,698 25
Net balance at end of previous fiscal year	\$10,998 23	\$15,061 03	\$7,908 33	\$940 41	\$1,915 53			\$50,000 00		\$110,239 71
Decrease in net indebtedness								\$30,000 00		\$121,458 54

• Donate credits.

LEWIS AND CLARKE COUNTY.

	General Fund..	Contingent Fund	Road and Bridge Fund.	Poor Fund	Bond, Interest and Sinking Fund	Bonds, 5½ Per Cent..	Total.....
Gross Indebtedness December 1, 1898, (including all unpaid Warrants and Bonds and accrued interest on the same)							
Bonds issued during fiscal year ending Nov. 30, 1899	\$20,407 76	\$3,700 66	\$6,341 21	\$2,896 98	\$5,225 00	\$190,000 00	\$229,570 61
Bond and Warrant interest accruing year ending Nov. 30, 1899	47,654 16	53,307 75	15,000 13	21,602 07	.....	.....	147,654 11
Total	68,061 92	57,008 41	21,341 34	24,500 05	10,450 00	.....	11,948 64
Warrants paid and cancelled during fiscal year ending Nov. 30, 1899	\$38,670 30	\$23,400 43	\$21,437 98	\$40,779 64	\$15,676 00	\$190,000 00	\$299,673 35
Bond and Warrant interest paid during fiscal year ending Nov. 30, 1899	53,631 61	53,000 80	12,877 11	24,239 35	.....	.....	157,899 16
Total	92,301 91	76,401 23	34,315 09	65,019 00	10,450 00	.....	11,948 64
Gross debt Nov. 30, 1899	\$59,290 19	\$32,444 61	\$12,823 06	\$24,629 34	\$5,225 00	.....	\$109,747 90
Money in Treasury on Nov. 30, 1899	9,380 11	10,018 42	8,054 32	6,149 70	5,225 00	190,000 00	239,235 55
Net balance Nov. 30, 1899	\$5,909 46	5 25	17,065 72	21,375 72	.....	.....	94,381 16
Net balance at end of previous fiscal year	\$46,574 36	\$19,611 17	\$2,501 29	\$16,236 02	\$5,225 00	\$190,000 00	\$194,334 40
Decrease in net indebtedness	\$15,009 46	4,701 59	5,234 53	10,549 80	5,225 00	.....	197,101 46
							\$22,197 06

* Denote credits.

SEVENTH ANNUAL REPORT OF BUREAU

MADISON COUNTY.

	General Fund..	Contingent Fund	Road Fund.....	Poor Fund	Bridge Fund.	Bond, Interest and Sinking Fund	Bonds, 5% Per Cent..	Total.....
Gross Indebtedness Dec. 1, 1898, (being all unpaid Warrants and Bonds and accrued interest on the same).....	\$231.27	\$2,054.80	\$24.75	\$17.20	.....	\$2,291.67	\$100,000.00	\$105,292.69
Warrants issued during fiscal year ending Nov. 30, 1899	9,199.20	19,373.21	12,773.88	7,135.54	4,917.00	.....	.....	53,402.33
Bond and Warrant interest accruing year ending Nov. 30, 1899 .....	.....	12.95	.....	.....	.....	5,500.00	.....	5,512.95
Total	99,429.47	\$22,446.06	\$12,808.63	\$7,152.74	\$4,917.00	\$7,791.67	\$100,000.00	\$164,546.57
Warrants paid and cancelled during fiscal year ending Nov. 30, 1899	9,160.95	22,316.17	12,708.63	7,119.29	4,917.00	.....	.....	56,221.14
Bond and Warrant interest paid during fiscal year ending Nov. 30, 1899 .....	.....	128.00	.....	.....	.....	5,500.00	.....	5,628.00
Total	\$9,160.95	\$22,444.16	\$12,708.63	\$7,119.29	\$4,917.00	\$5,500.00	.....	\$61,549.23
Gross debt Nov. 30, 1899	239.22	1.30	100.00	84.25	.....	2,291.67	100,000.00	102,697.34
Money in Treasury on Nov. 30, 1899	12,519.96	10,291.30	9,287.80	2,173.25	2,931.18	.....	.....	39,144.61
Net balance Nov. 30, 1899	\$12,280.74	\$10,290.00	\$9,187.80	\$2,111.00	\$2,014.18	\$2,291.67	\$100,000.00	\$92,528.73
Net balance at end of previous fiscal year	\$9,764.28	\$5,513.25	\$7,591.92	\$7,289.29	\$104.99	2,291.67	100,000.00	75,761.49
Decreases in net indebtedness .....	.....	.....	.....	.....	.....	.....	.....	\$16,767.25

* Denote credits.

MEAGHER COUNTY.

	General Fund..	Contingent Fund	Road Fund.....	Poor Fund	Bridge Fund....	Institute Fund	Bond, Interest and Sinking Fund	Bonds, 6 Per Cent...	Bonds, 7 Per Cent....	Total.....
Gross Indebtedness December 1, 1898, (including all unpaid Warrants and Bonds and accrued interest on the same)	66 50	.....	41 00	3 14	528 54	.....	85,985 53	\$138,000 00	\$50,000 00	\$194,435 01
Warrants issued during fiscal year ending Nov. 30, 1899	7,199 40	15,355 55	4,124 01	1,503 97	1,219 53	58 50	.....	.....	.....	22,545 50
Bond and Warrant interest accruing year ending Nov. 30, 1899 .....	.....	.....	.....	.....	.....	.....	11,750 00	.....	.....	11,750 00
Total	\$7,266 44	\$15,355 55	\$4,173 01	\$1,507 11	\$1,747 47	\$58 50	\$17,765 53	\$138,000 00	\$50,000 00	\$236,523 51
Warrants paid and cancelled during fiscal year ending Nov. 30, 1899	7,126 84	15,355 55	4,104 04	1,505 35	1,747 47	53 50	.....	.....	.....	30,289 33
Bond and Warrant interest paid during fiscal year ending Nov. 30, 1899 .....	.....	.....	.....	.....	.....	.....	12,857 35	.....	.....	12,857 35
Total	\$7,126 84	\$15,355 55	\$4,104 04	\$1,505 35	\$1,747 47	\$53 50	\$12,857 35	.....	.....	\$42,156 53
Gross debt Nov. 30, 1899	119 50	.....	57 97	1 15	.....	.....	4,938 33	125,000 00	50,000 00	185,097 28
Money in Treasury on Nov. 30, 1899	23,305 55	2,029 25	2,555 79	4,261 20	3,194 95	75 50	54,353 96	.....	.....	101,657 54
Net balance Nov. 30, 1899	\$23,185 05	\$2,029 25	\$2,497 82	\$4,259 05	\$2,104 30	\$22 00	\$49,416 65	\$138,000 00	\$50,000 00	\$201,409 54
Net balance at end of previous fiscal year	\$7,254 00	\$1,355 55	\$3,146 01	\$1,454 03	\$1,173 42	\$57 00	\$26,599 25	125,000 00	50,000 00	112,651 25
Decrease in net indebtedness .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	\$88,641 41

* Denote credits.

MISSOULA COUNTY.

	General Fund..	Contingent Fund	Road Fund.....	Poor Fund	Taxes, etc Fund not Distributed...	Sinking Fund..	Bond and Interest Fund	Bonds, 6 Per Cent....	Bonds, 7 Per Cent....	Bonds, 5 Per Cent...	Total.....
Gross indebtedness Dec. 1, 1898. (Being all unpaid Warrants and Bonds accrued interest on same)	\$22,799 30	\$69,275 45	\$15,066 27	\$22 35	.....	.....	.....	\$190,000 00	\$23,000 00	\$4,320 00	\$425,382 24
Warrants issued during fiscal year ending Nov. 30, 1899.....	17,530 41	31,613 32	10,511 60	7,233 43	.....	.....	.....	.....	.....	.....	61,894 25
Bond and Warrant interest accruing year ending Nov. 30, 1899	6,331 79	2,685 05	831 23	36 71	.....	.....	15,022 50	.....	.....	.....	26,700 33
Total	\$106,661 50	104,517 29	\$27,009 20	\$7,307 46	.....	.....	15,022 50	\$190,000 00	\$23,000 00	\$4,320 00	\$515,527 97
Warrants paid and cancelled during fiscal year ending Nov. 30, 1899	23,513 13	27,506 46	11,303 30	4,871 45	.....	.....	.....	.....	.....	.....	73,795 34
Bond and Warrant interest paid during fiscal year ending Nov. 30, 1899.....	5,331 79	3,623 05	831 23	36 71	.....	.....	15,022 50	.....	.....	.....	26,700 33
Total	\$34,744 97	\$31,127 00	\$12,724 53	\$4,908 16	.....	.....	15,022 50	.....	.....	.....	\$99,527 35
Gross debt Nov. 30, 1899	71,906 53	73,390 29	14,314 57	2,449 23	.....	.....	.....	190,000 00	63,000 00	4,320 00	415,300 71
Money in Treasury on Nov. 30, 1899	25,033 20	21,551 05	10,365 03	2,561 59	6,737 20	31,493 59	5,889 47	.....	.....	.....	107,306 43
Net balance Nov. 30, 1899	\$46,773 27	\$51,739 24	\$3,449 49	\$1,112 57	\$6,737 20	\$24,493 59	\$5,889 47	\$190,000 00	\$63,000 00	\$4,320 00	\$512,604 23
Net balance at end of previous fiscal year	67,873 57	54,273 27	10,365 03	\$236 71	\$6,850 51	\$10,215 12	\$3,523 10	190,000 00	63,000 00	4,320 00	\$393,085 65
Decrease in net indebtedness .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	\$56,923 43

* Denote credits.

RAVALLI COUNTY.

	General Fund..	Contingent Fund	Road Fund.....	Poor Fund	Bond, Interest and Sinking Fund	Bonds, 6 Per Cent..	Total.....
Gross Indebtedness, December 1, 1898, (being all unpaid Warrants and Bonds and accrued interest on the same)	\$2,922 26	\$7,067 35	\$12,320 75	\$4,169 33	.....	\$75,000 00	\$114,439 69
Warrants issued during fiscal year ending Nov. 30, 1899	17,649 23	17,114 59	15,229 16	3,006 75	.....	.....	53,009 73
Bond and Warrant interest accruing year ending Nov. 30, 1899	499 55	424 23	1,014 55	106 00	4,500 00	.....	6,545 11
Total	\$23,071 04	\$24,606 17	\$28,564 46	\$7,282 17	\$4,500 00	\$75,000 00	\$174,004 33
Warrants paid and cancelled during fiscal year ending Nov. 30, 1899	10,755 21	15,222 59	7,793 11	1,824 29	.....	.....	26,740 30
Bond and Warrant interest paid during fiscal year ending Nov. 30, 1899	499 55	424 23	1,014 55	106 00	4,500 00	.....	6,545 11
Total	\$11,254 76	\$15,747 51	\$8,807 66	\$1,930 29	\$4,500 00	.....	\$43,285 41
Gross debt Nov. 30, 1899	12,746 28	7,819 35	25,361 30	5,341 69	.....	75,000 00	126,799 12
Money in Treasury on Nov. 30, 1899	19,313 16	12,300 17	9,273 66	3,135 75	8,532 25	.....	52,000 02
Net balance Nov. 30, 1899	\$2,506 86	\$4,460 23	\$16,087 64	\$2,205 94	\$3,532 25	\$75,000 00	\$73,192 09
Net balance at end of previous fiscal year	3,154 67	511 36	13,900 44	3,113 35	\$4,102 62	75,000 00	\$1,577 26
Decrease in net indebtedness .....	.....	.....	.....	.....	.....	.....	\$11,394 11

• Denote credits.

SWEDESBURG GRASS COUNTY.

	General Fund..	Contingent Fund	Road Fund.....	Poor Fund	Bond, Interest and Sinking Fund	Bonds, 6 Per Cent....	Total.....
Gross Indebtedness December 1, 1898, (being all unpaid Warrants and Bonds and accrued interest on the same)	\$371 53		\$230 50		\$2,375 00	\$85,000 00	\$87,953 03
Warrants issued during fiscal year ending Nov. 30, 1899	8,974 18	10,365 59	5,638 78	1,407 40			26,585 96
Warrant interest accruing year ending Nov. 30, 1899					5,700 00		5,700 00
Total	\$9,345 71	\$10,365 59	\$8,175 28	\$1,407 40	\$8,075 00	\$85,000 00	\$130,368 98
Warrants paid and cancelled during fiscal year ending Nov. 30, 1899	9,294 60	10,365 59	6,157 91	1,405 40			\$7,123 59
Bond and Warrant interest paid during fiscal year ending Nov. 30, 1899	1 80		38		5,700 00		5,701 58
Total	\$9,296 40	\$10,365 59	\$6,195 29	\$1,405 40	\$6,700 00		\$32,558 47
Gross debt Nov. 30, 1899	40 60		17 00	2 00	2,375 00	85,000 00	\$7,443 52
Money in Treasury on Nov. 30, 1899	12,355 76	9,639 05	5,208 19	1,873 37	6,508 70		35,683 97
Net balance Nov. 30, 1899	\$12,295 94	\$9,639 05	\$5,191 19	\$1,871 37	\$4,132 70	\$85,000 00	\$51,785 45
Net balance at end of previous fiscal year	\$7,423 06	\$5,158 08	\$3,653 14	\$931 77	\$1,905 04	\$85,000 00	\$77,543 79
Decrease in net indebtedness							\$18,537 34

* Denote credits.

SILVER BOW COUNTY.

	General Fund..	Contingent Fund	Road Fund.....	Poor Fund	Bond, Interest and Sinking Fund	Bonds, 5 Per Cent....	Total.....
Gross indebtedness Dec. 1, 1899, (being all unpaid Warrants and Bonds and accrued interest on the same).....	\$1,084 93	473 79	53 39	\$323 06	.....	\$125,000 00	\$126,394 18
Warrants issued during fiscal year ending Nov. 30, 1899	98,023 73	113,614 49	34,227 56	47,944 37	.....	.....	293,210 64
Bond and Warrant interest accruing year ending Nov. 30, 1899 .....	.....	.....	.....	.....	6,350 00	.....	6,350 00
Total	\$99,248 94	\$118,093 28	\$34,285 96	\$48,196 83	\$6,350 00	\$125,000 00	\$431,084 80
Warrants paid and cancelled during fiscal year ending Nov. 30, 1899	97,654 25	113,563 24	34,167 86	47,726 81	.....	.....	283,108 25
Bond and Warrant interest paid during fiscal year ending Nov. 30, 1899 .....	.....	.....	.....	.....	6,350 00	.....	6,350 00
Total	\$97,654 25	\$113,563 24	\$34,167 86	\$47,726 81	\$6,350 00	.....	\$294,413 25
Gross debt Nov. 30, 1899	1,894 39	130 04	88 09	400 13	.....	125,000 00	127,513 65
Money in Treasury on Nov. 30, 1899	350,719 49	3,343 24	15,343 76	40,233 53	45,373 24	125,000 00	255,175 55
Net balance Nov. 30, 1899	*148,825 10	*43,113 30	*75,255 70	*23,833 70	*45,373 24	.....	*127,598 10
Net balance at end of previous fiscal year	*20,009 65	*15,305 74	*10,103 38	*31,896 17	*31,435 04	.....	6,350 02
Decrease in net indebtedness .....	.....	.....	.....	.....	.....	.....	\$121,007 08

* Denote credits.

TEBON COUNTY

	General Fund..	Contingent Fund	Road Fund....	Poor Fund	Bridge Fund....	Institute Fund	Bond, Interest and Sinking Fund.....	Bonds, 6 Per Cent....	Total.....
Gross Indebtedness Dec. 1, 1892, (being all unpaid Warrants and Bonds and accrued interest on the same).....	\$2,540 28	\$387 24	\$70 50	\$30 00	.....	.....	\$1,500 00	\$80,000 00	\$85,008 06
Warrants issued during fiscal year ending Nov. 30, 1899	10,547 28	11,813 05	6,941 65	1,385 79	9,475 00	52 70	.....	.....	48,787 77
Bond and Warrant interest accruing year ending Nov. 30, 1899	26 24	96	.....	.....	.....	.....	2,000 00	.....	2,026 20
Total	\$22,210 54	\$12,696 85	\$7,012 15	\$1,895 79	\$9,475 00	\$53 70	\$85,100 00	\$80,000 00	\$115,412 03
Warrants paid and cancelled during fiscal year ending Nov. 30, 1899	14,948 90	8,879 28	6,081 14	1,895 14	1,380 99	52 70	.....	.....	\$1,908 15
Bond and Warrant interest paid during fiscal year ending Nov. 30, 1899	28 24	96	.....	.....	.....	.....	2,000 00	.....	2,026 20
Total	\$14,975 14	\$8,930 94	\$6,081 14	\$1,895 14	\$1,380 99	\$53 70	\$87,100 00	.....	\$86,544 24
Gross debt Nov. 30, 1899	7,254 40	4,106 61	931 01	1 65	2,084 01	.....	1,500 00	60,000 00	\$1,887 68
Money in Treasury on Nov. 30, 1899	14,994 08	5,414 82	6,933 80	1,884 63	2,023 14	8 00	2,781 66	60,000 00	\$4,139 20
Net balance Nov. 30, 1899	\$7,739 63	\$1,308 21	\$4,022 79	\$3,182 98	\$5,471 87	\$23 00	\$28,281 66	.....	\$17,683 48
Net balance at end of previous fiscal year	\$6,288 23	\$1,878 73	\$3,497 69	\$319 71	\$523 64	\$0 00	\$1,185 47	.....	\$6,367 24
Increase in net indebtedness .....	.....	.....	.....	.....	.....	.....	.....	.....	\$1,497 24

* Denote credits.

VALLEY COUNTY.

	General Fund..	Contingent Fund	Road Fund.....	Poor Fund	Bridge Fund.	Bond, Interest and Sinking Fund.....	Bonds, 7 Per Cent...	Total.....
Gross Indebtedness Dec. 1, 1898, (being all unpaid Warrants and Bonds and accrued interest on the same).....	\$7,876 15	\$12,166 36	.....	\$6 00	.....	.....	\$27,000 00	\$27,047 51
Warrants issued during fiscal year ending Nov. 30, 1899	11,949 43	10,321 90	2,053 14	2,647 90	11,795 25	.....	.....	33,965 02
Bond and Warrant interest accruing year ending Nov. 30, 1899	603 30	1,032 32	6 51	22 49	38 35	4,090 00	.....	6,492 97
Total	\$20,126 88	\$24,071 58	\$2,067 65	\$2,676 29	\$11,874 90	\$4,090 00	\$27,000 00	\$122,677 10
Warrants paid and cancelled during fiscal year ending Nov. 30, 1899	17,266 96	20,128 02	2,051 14	2,632 90	6,397 00	.....	.....	49,606 01
Bond and Warrant interest paid during fiscal year ending (Nov. 30, 1899)	602 30	1,032 32	6 51	22 49	39 35	4,090 00	.....	6,492 97
Total	\$17,869 26	\$21,211 34	\$2,057 65	\$2,655 39	\$6,399 35	\$4,090 00	.....	\$25,499 01
Gross debt Nov. 30, 1899	2,257 60	2,893 24	11 00	21 00	4,393 25	.....	67,000 00	77,095 09
Money in Treasury on Nov. 30, 1899	4,334 25	1,350 21	3,549 09	2,306 39	92 57	6,194 73	.....	17,233 14
Net balance Nov. 30, 1899	\$2,095 65	\$1,510 03	\$3,538 09	\$2,294 29	\$4,794 38	\$6,194 73	\$27,000 00	\$29,779 55
Net balance at end of previous fiscal year	5,072 19	9,550 77	\$3,727 79	\$2,355 80	\$1,506 27	\$3,769 26	67,000 00	70,251 54
Decrease in net indebtedness .....	.....	.....	.....	.....	.....	.....	.....	\$10,411 99

* Denote credits.

YELLOWSTONE COUNTY.

	General Fund..	Contingent Fund	Road Fund.....	Poor Fund	Bridge Fund.	Bond, Interest and Sinking Fund.....	Bonds, 5 Per Cent...	Total.....
Gross Indebtedness Dec. 1, 1898, (being all unpaid Warrants and Bonds and accrued interest on the same).....	\$24 85		\$4,055 00	\$73 00		\$4,051 50	\$91,500 00	\$153,717 01
Warrants issued during fiscal year ending Nov. 30, 1899	17,690 57	20,835 00	12,035 32	4,895 57				65,057 46
Bond and Warrant interest accruing year ending Nov. 30, 1899			149 00			8,129 72		8,299 76
Total	\$17,690 57	\$20,835 00	\$12,184 32	\$4,970 57		\$12,159 22	\$91,500 00	\$223,014 42
Warrants paid and cancelled during fiscal year ending Nov. 30, 1899	17,000 00	20,835 00	16,652 53	4,559 33				60,129 92
Bond and Warrant interest paid during fiscal year ending Nov. 30, 1899			149 00			8,129 72		8,299 76
Total	\$17,000 00	\$20,835 00	\$16,801 53	\$4,559 33		\$8,129 72		\$95,400 67
Gross debt Nov. 30, 1899	23 80		9 00	11 75		4,051 50	\$1,500 00	\$14,604 75
Money in Treasury on Nov. 30, 1899	20,100 94	13,154 15	7,271 06	8,938 33	51 36	13,050 30		62,391 77
Net balance Nov. 30, 1899	\$20,079 44	\$13,154 15	\$7,262 06	\$8,926 58	\$51 36	\$12,949 40	\$1,500 00	\$32,312 95
Net balance at end of previous fiscal year	\$13,116 46	\$6,710 72	\$460 92	\$925 61	\$23 76	\$3,385 25	\$1,500 00	\$21,901 76
Decrease in net indebtedness								\$10,411 19

* Denote credits.

SEVENTH ANNUAL REPORT OF BUREAU

RECAPITULATION.

Bonds and Warrants outstanding December 1st, 1896	\$4,066,225 95	
Warrants issued during 1899	1,781,774 40	
Bonds issued during 1899	222,000 00	
Bonds and Warrant interest accruing during 1899	243,943 40	
		\$6,403,963 95

CONTRA.

Warrants paid during 1899	\$1,886,981 99	
Bonds paid during 1899	110,000 00	
Band and Warrant interest paid during 1899	948,726 34	
Cash in Treasuries	1,740,574 82	
Net indebtedness November 30th, 1899	2,432,721 80	
		\$6,403,963 95

RECAPITULATION OF COUNTY RECEIPTS AND DISBURSEMENTS FOR
YEAR ENDING NOVEMBER 30, 1899.

	Balance in fund Dec. 1, 1896	Received for credit during year	Total	Paid out and charg'd during year	Balance to credit of fund Nov. 30, 1899
General Fund	\$ 347,346 50	\$1,354,536 87	\$1,701,783 37	\$41,104 50	\$ 760,678 87
Contingent Fund	166,632 86	769,732 63	936,415 29	708,621 86	228,593 43
Road Fund	103,238 10	459,496 83	562,734 93	356,636 42	206,098 51
Poor Fund	98,656 27	277,085 19	375,741 46	216,960 94	158,780 52
Bridge Fund	27,129 41	136,510 24	163,639 65	95,026 64	68,613 01
Sinking Fund	122,683 28	216,296 63	338,979 91	139,473 63	199,506 28
Bond Fund	46,599 35	131,119 02	177,718 37	87,994 11	89,724 26
General School Fund	167,996 82	831,169 90	1,019,166 62	616,444 75	602,721 87
District School Fund	284,163 91	962,426 01	1,246,590 92	946,905 78	300,784 14
City Fund	76,085 83	369,321 55	445,417 47	288,994 19	156,423 28
State Fund	164,824 21	643,901 60	813,725 81	436,418 48	377,307 33
State Bounty Fund	11,653 98	68,464 72	80,118 71	49,428 14	30,690 57
Stock Insp. & Det. Fund	9,004 19	29,076 05	38,080 24	19,630 76	18,449 48
Stock Indemnity Fund	2,061 48	4,833 63	6,895 01	4,625 02	2,269 99
Sheep Insp. & Ind. Fund	2,089 23	4,936 13	6,965 36	3,636 27	3,329 09
State Stock Bounty Fund	22,467 69	96,396 54	120,864 23	47,969 66	72,894 57
Dist. Court Clerk Deposit	26,116 88	21,237 10	47,443 98	28,473 14	18,969 84
Estate Unsettled	12,908 78	12,394 54	26,198 32	17,128 47	9,069 85
Institute Fund	621 49	1,311 45	1,932 94	1,167 95	765 09
Miscellaneous Funds	52,474 02	124,118 33	182,592 36	122,069 28	60,523 08
Total	\$1,770,489 28	\$6,512,904 87	\$8,283,403 85	\$6,081,192 85	\$2,202,211 00
Total transferred	\$1,770,489 28	\$984,637 15			
Cash	\$1,770,489 28	\$325,267 39	\$7,298,766 67	\$4,066,525 87	\$2,202,211 00

RECAPITULATION OF REVENUE RECEIPTS FOR YEAR ENDING NOVEMBER 30, 1899.

COUNTY.	Taxes, 1899.	Taxes, 1898. Not Delinquent.	Delinquent Taxes.	Penalty and Interest.	Licenses.	County Officers Fees.	Sale of County Bonds.	Sale of School District Bonds.	Other Sources.	TOTALS.
Beaverhead ..	878,616 49	828,913 68	61,270 50	\$119 96	\$14,181 59	23,083 46	\$20,000 00	.....	\$7,631 30	\$159,647 38
Broadwater ..	46,200 49	19,513 50	638 70	121 71	6,781 50	1,890 40	.....	\$3,375 00	4,417 01	87,987 00
Carbon ..	54,578 78	19,537 88	1,877 53	127 71	10,689 36	2,944 60	.....	15,400 00	9,468 74	114,178 51
Cascade ..	251,118 56	169,398 33	12,416 16	2,419 55	81,893 36	8,614 30	.....	.....	31,108 44	497,088 91
Chouteau ..	160,619 46	47,641 72	12,416 16	2,419 55	61,928 26	8,614 30	.....	.....	7,093 38	217,751 53
Custer ..	164,146 91	77,898 86	7,883 63	976 01	14,073 23	3,869 78	.....	9,300 00	1,770 30	293,648 30
Dawson ..	68,966 25	31,106 46	1,284 91	219 23	3,514 06	976 06	.....	.....	1,497 49	98,324 37
Deer Lodge ..	185,666 84	88,068 72	12,063 94	1,773 49	46,907 60	6,822 89	50,946 32	.....	13,938 28	429,624 69
Fergus ..	130,302 21	48,441 05	9,179 87	1,304 46	14,457 47	4,413 61	.....	6,143 73	7,283 46	201,365 91
Flathead ..	100,443 85	42,016 61	6,600 06	1,853 83	17,164 00	4,446 38	.....	1,128 00	6,126 86	173,172 73
Gallatin ..	146,893 84	61,796 23	8,035 56	2,894 43	13,667 60	4,836 38	137,000 00	.....	20,626 01	394,129 59
Granite ..	61,328 63	26,948 92	6,198 23	968 04	14,344 94	1,966 83	.....	.....	4,423 46	106,463 34
Idaho ..	62,490 69	21,196 33	10,445 39	1,423 20	12,601 00	5,741 30	.....	.....	4,312 51	130,169 77
Jefferson ..	245,437 32	135,943 65	16,463 37	3,973 00	64,703 86	12,004 19	.....	.....	41,863 80	498,334 90
Lewis and Clarke ..	71,476 97	29,140 88	1,369 36	268 29	14,703 60	3,103 86	.....	.....	4,096 73	126,213 83
Madison ..	68,947 47	8,938 50	19,309 06	2,063 69	4,304 00	6,065 24	.....	13,065 00	3,973 41	119,396 49
Meagher ..	151,100 00	71,833 43	13,068 32	3,913 23	36,441 00	5,056 13	.....	.....	7,700 63	279,365 72
Minaula ..	87,425 35	23,310 34	2,140 20	423 53	12,448 60	4,067 11	.....	.....	6,150 00	146,963 22
Park ..	67,300 23	27,060 63	3,385 63	1,066 60	7,869 76	3,929 77	.....	3,690 00	10,415 66	134,106 13
Reynolds ..	69,001 21	307,106 30	17,764 81	2,324 49	144,305 76	23,087 06	.....	.....	70,000 16	523,649 37
Silver Bow ..	64,083 94	17,329 05	1,720 69	351 23	6,318 09	3,366 08	.....	5,470 00	1,343 64	96,131 26
Sweet Grass ..	67,034 78	17,039 92	1,263 17	373 86	8,711 59	1,521 86	.....	.....	1,314 30	85,008 48
Teton ..	66,441 63	10,000 15	1,684 38	439 87	6,544 16	1,473 48	.....	.....	2,472 60	77,513 19
Valley ..	112,000 24	42,346 57	4,469 63	906 67	20,183 60	2,868 23	.....	8,300 00	8,062 17	199,068 60
Yellowstone ..	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total ..	\$2,862,577 66	\$1,552,157 31	\$102,361 43	\$30,078 39	\$635,913 71	\$114,818 94	\$297,648 32	\$93,366 36	\$232,152 76	\$6,535,397 39

STATEMENT OF STATE AND COUNTY TAXES DELINQUENT FOR 1899, AND DELINQUENT TAXES FOR PRIOR YEARS REMAINING UNCOLLECTED NOVEMBER 30, 1899.

COUNTY.	State Tax		Stock Indemnity Tax		Stock Ins. and Detect.		Sheep Ins. and Ind. Tax	
	1899	Prior ye's	1899	Prior years	1899	Prior ye's	1899	Prior years
Beaverhead	2217 01	\$239 45	90 53	20 57	\$113 09	\$10 68		
Broadwater	133 60	94 79	1 46	1 77	13 51	9 38		
Carbon*	300 77		3 12		33 47		\$5 31	
Cascade*	1,601 35		2 97		30 56			08
Chouteau*	413 15		4 08		63 85		18 97	
Custer	666 46	380 11	8 40	24 72	63 51	53 32	9 54	\$19 53
Dawson*	196 77		22 93		63 53		7 19	
Deer Lodge	689 96	929 39	2 24	23 56	131 65	47 57	3 90	94
Fergus	543 61	1,555 91	41 06	15 97	130 80	56 77		55
Flathead	668 38	1,199 59	6 80	21 67	75 71	26 64		
Gallatin	433 24	3,086 66	5 57	13 28	22 64	8 10		
Granite	416 24	743 37	8 65	5 02	11 96	8 90		
Jefferson	987 10	3,659 14	6 90	8 03	101 15	57 24		76
Lewis and Clarke	3,798 98	3,057 79	37 74	13 37	65 27	27 07	1 48	
Madison	198 35	294 34	2 16	3 97	13 00	33 11	5 63	62
Miner	342 02	1,117 90	1 10	5 16	14 24	124 53	20	39
Missoula	2,025 80	4,065 20	61 53	25 37	308 47	89 76		
Park*	766 65				60			3 39
Reynolds	240 85	953 70	71	23 03	25 51	1 78		01
Silver Bow	2,165 97	4,026 80	11 54	23 03	50 54	70 20	15	11 43
Sweet Grass	157 96	476 94	1 02	75	3 68	11 39	4 96	13 87
Teton	655 41	1,373 16	8 90	13 03	130 11	53 56	27 17	1 55
Valley	87 86	13 73	3 39	09	22 18	27	5 33	
Yellowstone*	549 04		2 79		21 91			
Total	\$ 18,046 57	\$27,867 85	\$236 19	\$255 15	\$1,477 14	\$740 61	\$102 31	\$39 54

* Totals only as to delinquent taxes for prior years.

STATE AND COUNTY TAXES DELINQUENT CO NTINUED.

COUNTY.	Stock Bounty		County		All other Taxes		Totals		Grand Totals
	1899	Prior ye'r's	1899	Prior years	1899	Prior years	1899	Prior year	
Beaverhead	\$32 21	\$21 43	\$719 95	\$1,109 97	\$315 46	\$75 14	\$1,023 23	\$1,449 23	\$3,090 56
Broadwater	43 15	27 01	307 06	599 45	321 86	150 92	1,313 64	941 86	2,153 50
Carbon	197 83	.....	2,171 01	.....	1,495 75	.....	4,130 96	8,673 50	12,195 46
Cascade	193 97	.....	7,336 43	.....	833 75	.....	10,043 04	7,573 83	17,631 92
Choteau	400 86	.....	2,904 36	.....	670 52	.....	4,073 89	2,714 30	7,198 69
Custer	610 73	213 61	3,789 94	2,431 23	2,894 28	194 21	7,765 87	2,131 72	10,447 39
Dawson	300 36	.....	1,994 18	.....	318 00	.....	2,309 17	16,201 28	13,000 64
Deer Lodge	114 15	105 74	4,014 73	7,478 77	2,371 53	3,933 45	7,335 39	12,533 19	19,638 23
Fergus	491 85	68 60	3,673 35	9,871 45	903 21	1,434 66	6,592 86	13,003 91	18,685 73
Flathead	241 25	110 49	4,853 14	10,313 63	1,811 66	3,856 19	7,665 96	59,529 21	23,174 16
Gallatin	119 25	142 35	3,300 49	12,023 15	1,697 66	8,851 54	4,399 35	24,737 65	29,136 30
Granite	55 25	30 92	3,995 63	4,454 36	2,241 47	943 33	5,739 59	6,084 69	11,844 29
Jefferson	440 30	237 73	6,117 09	13,234 21	1,448 60	2,717 41	8,199 05	24,334 04	33,053 09
Lewis and Clarke	139 20	58 12	13,309 24	12,209 61	1,020 57	6,213 15	24,223 43	21,005 23	45,628 66
Madison	111 09	29 61	1,031 33	1,245 63	434 63	473 23	1,965 61	2,167 94	4,163 55
Mason	103 06	76 86	2,043 77	8,319 50	493 35	673 51	10,317 05	49,035 89	69,421 10
Missoula	1,035 06	229 49	12,347 27	26,630 39	4,693 37	17,344 67	20,385 21	10,317 05	13,500 36
Park .....	.....	.....	2,395 85	.....	3,353 15	.....	7,393 16	5,563 64	13,432 80
Raynall	89 89	116 49	1,237 27	11,633 54	609 34	1,565 89	2,396 08	13,700 73	14,695 89
Silver Bow	173 65	214 15	19,755 03	21,153 97	2,065 33	23,739 29	16,347 21	55,799 35	71,646 39
Sweet Grass	100 97	168 74	1,941 36	3,393 51	370 41	1,042 74	1,630 52	5,633 69	7,269 32
Teton	804 88	467 41	3,723 34	6,538 13	609 63	3,097 72	6,079 69	10,251 54	15,251 54
Valley	134 87	73 02	733 02	198 21	72 00	6 00	1,112 87	139 23	1,243 69
Yellowstone	229 76	2,397 09	.....	.....	3,235 37	.....	7,045 95	3,099 58	10,135 53
Total.....	\$4,353 13	\$2,528 63	\$100,123 76	\$193,344 89	\$27,256 37	\$65,114 91	\$163,404 39	\$119,301 17	\$452,635 56

BONDS OUTSTANDING.

COUNTY.	County Bonds Outstanding	School District Bonds Outstanding	City Bonds Outstanding.	Total Bonds Outstanding.	Amount of Interest Paid Annually.
Beaverhead	\$90,000 00	\$12,000 00	.....	\$98,000 00	\$5,320 00
Broadwater	62,000 00	12,100 00	.....	75,100 00	4,506 00
Carbon	57,000 00	20,400 00	.....	77,400 00	4,534 00
Cascade	361,719 19	184,000 00	525,000 00	1,070,719 19	62,000 91
Choteau	200,000 00	10,000 00	12,500 00	222,500 00	13,475 00
Custer	274,000 00	17,640 00	17,000 00	308,640 00	18,513 40
Dawson	100,000 00	2,000 00	.....	102,000 00	5,250 00
Deer Lodge	250,000 00	127,000 00	52,000 00	429,000 00	24,010 00
Fergus	108,000 00	23,500 00	.....	131,500 00	7,200 00
Flathead	100,000 00	38,300 00	20,000 00	158,300 00	9,603 00
Gallatin	232,000 00	78,600 00	203,000 00	513,600 00	27,231 00
Granite ... ..	.....	30,000 00	.....	30,000 00	1,900 00
Jefferson	135,000 00	21,000 00	.....	156,000 00	3,225 00
Lewis and Clarke...	190,000 00	273,550 00	516,000 00	984,550 00	53,288 00
Madison	100,000 00	5,400 00	7,800 00	113,200 00	6,369 00
Meagher	128,000 00	12,000 00	20,000 00	260,000 00	14,200 00
Missoula	267,350 00	60,900 00	98,000 00	411,250 00	25,711 50
Park	200,000 00	27,900 00	10,000 00	237,900 00	15,329 00
Ravalli	75,000 00	22,128 00	.....	97,128 00	5,953 84
Silver Bow	125,000 00	60,000 00	140,000 00	325,000 00	18,150 00
Sweet Grass	95,000 00	13,720 00	.....	108,720 00	5,603 20
Teton	60,000 00	11,000 00	.....	71,000 00	4,200 00
Valley	67,000 00	.....	.....	67,000 00	4,600 00
Yellowstone	150,500 00	22,500 00	25,000 00	198,000 00	10,928 00
Totals	\$3,462,569 19	\$1,109,149 00	\$1,651,000 00	\$6,222,718 19	.....
Annual Interest ...	\$202,283 41	\$66,762 44	\$29,050 00	.....	\$298,096 25
Average rate	.068	.0619	.0639	.....	.0675

ITEMIZED STATEMENT OF COUNTY EXPENSES.

STATEMENT SHOWING BY COUNTIES THE AMOUNT PAID OUT ON ACCOUNT OF THE FOLLOWING CLASSIFIED EXPENSES FOR THE FISCAL YEAR ENDED NOVEMBER 30, 1906, AS REPORTED BY COUNTY CLERKS.

COUNTIES.	COURT EXPENSES.										
	Salary of Clerk of the District Court	Salary of the deputy Clerk of the District Court....	Salary of County Attorney and Assistants	Salary and mileage of Stenographer..	Salary of Sheriff..	Salaries of Deputy Sheriffs, Bailiffs, etc.	Expenses of Sheriff's office	Board of Prisoners	Jurors, fees, per diem and mileage	Witnesses fees, mileage and per diem	Contingent or miscellaneous court expense.....
Beaverhead	\$1,200 00	\$800 00	\$800 00	\$255 20	\$2,000 00	\$1,500 00	245 65	\$235 50	\$408 20	\$44 40	225 75
Broadwater	1,200 00	43 00	600 00	285 20	2,000 00	1,215 00	715 53	140 00	764 30	32 60	14 94
Carbon	1,200 00	55 00	677 63	421 00	1,800 00	1,183 22	715 53	140 00	287 30	285 70	77 80
Cascade	2,750 00	1,200 00	1,504 11	1,859 55	2,308 20	8,174 27	1,251 95	4,078 90	4,871 20	1,008 90	1,000 00
Chouteau	1,500 00	300 00	760 00	700 00	2,350 00	2,500 00	2,515 20	1,515 20	2,347 70	2,000 00	6,765 64
Custer	2,000 00	.....	2,000 00	507 35	2,700 00	4,005 80	.....	70 50	6,330 90	6,721 10	15 14
Dawson	1,100 00	.....	.....	45 08	1,650 00	858 25	213 25	70 50	1,123 20	231 00	2,146 85
Deer Lodge	2,000 00	1,120 25	1,212 46	1,285 90	2,700 00	6,353 27	2,395 55	6,396 00	7,753 20	2,895 70	713 03
Fergus	1,200 00	141 00	750 00	1,251 51	2,500 00	2,743 01	1,550 01	485 02	1,708 90	700 90	728 50
Fishhead	1,200 00	600 00	1,023 20	1,531 51	2,000 00	4,110 00	3,277 54	3,277 54	1,351 00	1,700 90	150 00
Gallatin	2,000 00	1,300 00	2,000 00	1,300 00	2,750 00	2,400 00	1,754 40	300 50	1,500 00	721 20	.....
Granite	1,200 00	.....	600 00	423 94	2,000 00	.....	523 10	145 00	1,315 00	.....	.....
Jefferson	1,200 00	372 50	800 00	527 70	2,000 00	2,750 35	1,910 00	770 50	1,351 10	609 70	225 00
Lewis and Clarke	2,000 00	5,100 00	4,167 23	2,642 00	2,500 00	7,900 00	480 00	2,608 00	7,607 00	2,464 55	2,671 30
Madison	1,200 00	400 00	600 00	446 73	2,000 00	1,200 00	1,477 25	575 20	1,573 20	1,228 90	.....
Meagher	1,200 00	81 00	700 00	446 50	2,350 00	1,331 10	1,231 10	123 80	845 10	1,000 00	.....
Missoula	2,000 00	1,200 00	940 95	1,251 20	2,750 00	2,829 65	2,155 25	2,107 00	2,321 00	1,300 00	1,000 10
Park	1,200 00	900 00	424 50	1,251 20	2,000 00	2,972 70	2,121 00	1,271 00	1,311 40	1,300 00	643 02
Raynolds	1,200 00	700 00	615 70	604 51	2,000 00	2,400 00	2,402 20	514 22	711 00	907 20	.....
Silver Bow	2,000 00	6,000 00	5,405 00	3,000 00	4,000 00	6,705 00	6,705 00	14,145 00	26,000 00	7,707 30	54 12
Sweet Grass	1,200 00	.....	1,000 00	375 58	1,300 00	923 51	1,194 00	400 10	630 00	205 00	.....
Teton	1,200 00	.....	400 00	285 58	1,300 00	2,970 16	1,305 25	283 50	2,000 00	680 00	255 50
Valley	1,200 00	.....	600 00	137 50	1,300 00	2,130 00	1,800 15	433 50	2,090 40	2,300 20	.....
Yellowstone	1,215 00	105 00	600 00	343 71	2,305 42	.....	1,428 25	778 00	2,214 00	4,767 00	1,100 75
Total	\$20,285 00	\$20,541 48	\$29,230 24	\$24,004 64	\$147,504 00	\$174,960 00	\$22,423 04	\$45,157 45	\$473,746 40	\$48,571 25	\$218,264 11

STATEMENT OF COUNTY EXPENSES 1888-Continued.

COUNTIES.	EXPENSES FOR JUSTICES' and CORONERS' COURTS						POOR FUND			
	Fees of Justices of the Peace	Fees of jurors	Fees of Witnesses.	Fees of Constables	Fees and expenses of Coroner	All other items of Justices' and Coroner's Courts	Acquiring and improving Poor Farm	Maintenance of Poor at Poor Farm	Aid of Poor other than at Poor Farm	Medical Attendance and medicines for County Poor
Beaverhead	\$72 00	\$85 50	.....	\$98 75	.....	.....	\$587 25	\$2,443 15	\$1,723 45	\$523 70
Broadwater	58 20	98 30	.....	43 75	5 50	.....	.....	1,000 00	1,125 83	795 00
Carbon	252 50	94 00	.....	205 00	81 25	57 80	.....	.....	499 30	225 00
Cascade	1,121 00	245 00	.....	1,123 04	617 45	.....	681 12	2,406 11	2,455 54	1,170 21
Choteau	946 00	143 50	.....	735 25	550 00	453 00	.....	.....	6,000 14	2,680 03
Custer	525 00	274 50	.....	13 50	32 50	322 80	119 70	2,229 73	1,254 12	229 50
Davison	22 50	21 50	1 00	2,065 08	22 50	75 00	.....	39 55	1,603 88	245 00
Deer Lodge	1,219 15	672 30	.....	184 00	385 84	91 00	.....	2,307 28	16,054 75	1,085 00
Fergus	595 00	90 00	.....	604 96	249 84	108 50	.....	1,367 45	1,555 20	455 20
Flathead	261 00	27 00	.....	76 70	113 40	108 50	.....	2,587 03	2,587 03	685 00
Galatin	369 70	308 00	.....	210 80	113 40	.....	.....	2,908 34	.....	.....
Granite	137 20	46 00	.....	468 35	168 95	121 35	.....	1,237 48	2,929 41	.....
Jefferson	249 00	175 00	.....	940 35	441 15	.....	82 00	1,207 48	1,707 48	231 64
Lewis and Clarke	949 95	225 80	.....	384 85	424 00	.....	2,009 00	16,997 11	2,000 00	2,000 00
Madison	217 30	195 00	.....	234 85	424 00	.....	1,799 00	2,500 00	980 00	250 00
Meagher	87 00	13 00	.....	1,435 40	227 45	.....	.....	2,349 51	916 45	412 22
Minotula	1,084 16	301 80	.....	158 40	96 35	.....	365 00	1,417 79	2,353 45	626 23
Park	304 50	157 15	.....	443 70	100 00	137 50	.....	15,909 42	1,700 00	255 23
Ravalli	437 90	118 60	100 00	2,368 50	3,539 30	.....	.....	.....	22,752 25	1,539 24
Silver Bow	3,303 15	1,363 50	.....	.....	19 95	.....	.....	.....	489 70	300 00
Sweet Grass	123 50	25 00	.....	.....	19 95	101 40	.....	259 45	154 15	231 23
Teton	324 50	25 00	75 00	4 00	.....	.....	.....	.....	1,257 15	750 00
Valley	213 75	211 00	27 00	43 10	235 00	.....	.....	1,531 64	1,300 49	250 00
Yellowstone	258 40	57 50	153 70	108 40	257 10	153 50	.....	.....	.....	.....
Total	\$11,884 29	\$4,951 45	\$1,065 70	\$12,793 25	\$7,469 98	\$2,467 20	\$5,796 77	\$51,375 01	\$74,063 18	\$19,070 41

STATEMENT OF COUNTY EXPENSES 1898—Continued.

COUNTIES.	OTHER EXPENDITURES.						
	Salaries of County Officers	Salaries of Deputy County officers ..	Books and Stationery	Printing and Advertising	Fuel, Lights, Water, Ice, etc	Erection of Public Buildings other than at Poor Farm	Permanent Improvement on buildings other than at Poor Farm
Beaverhead	\$5,000 00	\$2,500 70	.....	\$75 00	\$120 20	.....	.....
Broadwater	10,500 00	.....	.....	1,574 77	314 06	.....	.....
Carbon	6,300 20	1,120 00	.....	552 08	220 53	400 41	.....
Cascade	11,250 00	11,250 17	.....	10,483 97	1,413 10	.....	.....
Choteau	7,250 10	2,000 00	.....	1,423 08	1,527 34	.....	.....
Custer	9,507 50	2,885 20	.....	654 15	1,465 08	.....	.....
Dawson	5,577 53	.....	.....	1,110 25	144 12	.....	.....
Deer Lodge	10,414 41	6,161 92	.....	855 50	2,853 06	16,940 40	.....
Fergus	7,065 79	2,470 00	.....	2,657 23	1,077 11	.....	.....
Flathead	8,000 30	2,124 63	.....	1,151 18	1,219 46	.....	.....
Gallatin	7,800 00	2,235 00	.....	7,128 57	.....	.....	.....
Granite	13,208 96	.....	.....	1,484 50	950 69	.....	.....
Jefferson	6,221 00	2,006 54	.....	554 14	1,625 22	.....	.....
Levi and Clarke	15,365 40	9,455 61	.....	6,639 55	2,408 37	.....	.....
Madison	8,800 00	1,493 66	.....	1,680 23	183 48	650 00	.....
Mason	7,967 20	1,915 72	.....	524 16	223 50	.....	.....
Miner	9,523 97	6,223 27	.....	963 67	1,031 79	.....	.....
Missoula	7,085 45	2,654 71	.....	2,045 27	1,243 62	1,040 00	.....
Park	6,918 70	2,000 00	.....	688 61	963 81	.....	.....
Ravalli	39,475 75	41,933 64	.....	6,461 64	3,460 05	.....	.....
Silver Bow	4,300 00	.....	.....	552 79	209 22	6,791 55	.....
Sweet Grass	6,441 24	.....	.....	328 29	350 78	1,708 50	.....
Teton	11,279 20	1,626 05	.....	882 60	707 55	.....	.....
Valley	9,523 08	.....	.....	1,088 00	1,278 22	.....	.....
Yellowstone .....	.....	.....	.....	.....	.....	.....	.....
Total	\$226,000 75	\$100,327 64	\$24,386 05	\$61,011 15	\$23,745 58	\$27,000 45	\$22,800 85
							\$15 51 23

SEVENTH ANNUAL REPORT OF BUREAU

STATEMENT OF COUNTY EXPENSES 1899--Continued.

COUNTIES.	OTHER EXPENDITURES.					
	Election expenses ..	Bridges Road and Highways	Interest paid on County bonds ..	Interest paid on County warrants	All other expenses	Total
Beaverhead .....	.....	\$7,184 73	\$4,970 00	\$659 74	\$374 65	\$36,016 13
Broadwater .....	.....	7,853 23	2,730 00	130 73	7,524 31	46,700 09
Carbon	34 90	7,764 90	2,620 00	366 97	2,067 86	32,383 20
Cascade	1,613 44	24,785 04	22,671 18	2,574 43	125,729 39	118,157 98
Chouteau .....	.....	6,013 75	15,440 43	2,373 34	7,658 78	81,053 73
Custer	3 80	8,524 63	12,640 00	.....	80,611 61	1,900 00
Dawson	108 00	6,830 85	6,121 80	2,106 34	413 00	28,363 07
Deer Lodge	2,304 90	16,388 32	7,600 00	5,235 44	10,306 51	106,498 45
Fergus .....	.....	10,614 56	6,210 90	115 61	2,373 80	50,021 42
Flathead	6 00	8,341 97	6,000 00	2,853 58	3,064 30	68,080 07
Gallatin .....	.....	33,379 74	5,714 24	6,960 18	.....	83,868 72
Granite .....	.....	11,170 33	.....	1,118 91	30,009 98	.....
Jefferson .....	.....	7,023 41	25,000 00	9,471 01	3,688 84	74,537 22
Levi and Clarke	15 75	17,795 04	30,450 00	1,891 51	7,897 57	146,133 89
Madison	3 75	17,863 53	5,500 00	79 46	151 25	71,410 03
Mengton	5 00	7,775 83	10,638 29	.....	35 00	37,905 00
Nimoula .....	.....	9,528 34	16,040 00	7,215 46	.....	650 00
Park .....	.....	7,189 11	12,800 00	.....	2,079 37	86,147 78
Ravalli	10 00	10,477 22	4,500 00	1,486 41	2,170 37	63,201 99
Silver Bow	18 37	26,461 98	6,550 10	.....	779 19	304,955 70
Sweet Grass	6 00	7,071 58	2,600 00	83 03	2,394 06	38,573 57
Teton .....	.....	4,323 84	4,000 00	67 00	2,367 66	25,967 99
Valley .....	.....	1,253 30	2,699 00	1,908 37	.....	26,038 43
Yellowstone	35 55	7,023 54	9,963 00	1,256 47	2,604 40	67,833 72
Total	\$5,163 10	\$200,683 12	\$306,733 04	\$44,957 32	\$85,038 21	\$1,786,676 04

STATEMENT OF COUNTY EXPENSES 1891.—Continued.

COUNTIES.	JUSTICE AND CORONER'S COURTS.						POOR FUND.			
	Fees of Justices of the Peace	Fees of Jurors	Fees of Witnesses.	Fees of Constables.	Fees and expenses of Coroner	All other items of Justices and Coroner's courts	Acquiring and improving Poor Farm	Maintenance of Poor at Poor Farm	Aid of poor other than at Poor Farm	Medical attendance and medicines for County Poor
Beaverhead	\$187 00	\$22 00	.....	\$147 05	\$134 00	.....	\$48 05	\$2,164 30	\$1,002 90	\$202 21
Broadwater	102 30	121 00	.....	6 70	236 70	.....	.....	2,000 00	142 24	655 40
Carbon	273 00	63 00	.....	163 20	200 00	148 05	.....	.....	521 20	400 00
Cascade	1,224 45	434 50	.....	468 90	.....	.....	236 64	4,929 72	6,281 20	1,523 22
Chouteau	982 20	204 00	.....	983 15	650 00	650 00	.....	1,704 66	837 67	2,130 00
Custer	369 05	177 80	87 00	415 15	46 40	31 70	719 20	109 00	904 58	286 40
Dawson	143 30	104 80	.....	75 14	.....	.....	.....	.....	.....	983 00
Deer Lodge	1,671 53	594 00	.....	1,270 55	195 15	559 53	.....	.....	19,136 20	1,403 00
Fergus	621 00	83 00	.....	117 20	205 40	.....	.....	2,075 14	1,406 86	1,463 14
Flathead	530 28	65 10	.....	475 46	284 00	204 00	.....	1,283 00	1,457 84	500 18
Gallatin	383 50	140 65	.....	47 45	200 25	39 45	.....	4,246 00	.....	.....
Granite	353 50	63 00	.....	167 30	.....	59 00	.....	.....	4,294 53	.....
Jefferson	445 45	250 50	.....	289 30	.....	.....	199 20	1,079 52	2,087 23	280 00
Lewis and Clarke	693 53	423 00	.....	493 33	477 75	.....	16,200 00	15,200 00	1,629 84	1,800 00
Madison	253 70	83 00	.....	305 05	184 70	.....	2,050 00	3,813 20	900 00	350 00
Mesa	60 00	128 00	.....	.....	11 95	.....	43 00	874 54	440 60	521 83
Miner	1,098 46	310 00	.....	1,547 28	310 05	5 00	156 75	2,599 15	3,819 01	454 00
Missoula	253 40	104 90	.....	289 20	131 65	.....	353 05	1,170 17	2,416 21	286 00
Park	412 15	144 90	63 25	260 00	120 15	163 00	.....	12,064 42	31,045 50	2,608 74
Ravalli	2,748 85	1,194 20	.....	2,053 19	4,429 70	.....	.....	.....	307 40	300 00
Silver Bow	87 50	24 70	.....	22 60	69 30	.....	.....	.....	205 15	649 57
Sweet Grass	217 80	27 00	99 00	42 93	153 80	122 50	.....	622 07	1,947 90	700 00
Teton	203 00	91 00	.....	78 00	209 00	37 50	.....	.....	1,463 74	300 00
Valley	300 20	15 00	209 10	309 16	464 75	332 50	.....	2,121 53	.....	.....
Yellowstone .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total	\$14,484 35	\$5,227 26	\$553 80	\$11,273 50	\$2,985 40	\$2,615 48	\$19,923 96	\$92,312 76	\$49,148 88	\$17,668 31

STATEMENT OF COUNTY EXPENSES 1899.—Continued.

COUNTIES.	OTHER EXPENDITURES.					
	Salaries of County Officers	Salaries of Deputy County officers ..	Books and Stationery	Printing and Advertising	Fuel, Lights, Water, Ice, etc	Erection of public buildings other than at Poor Farm
Beaverhead	\$5,000 00	\$2,102 30	\$948 45	\$2,321 85	\$274 65	.....
Broadwater	8,613 54	.....	7 50	1,918 19	233 69	.....
Carbon	7,171 40	1,300 00	1,789 38	2,664 01	543 94	.....
Cascade	11,320 00	2,000 00	153 86	8,417 57	911 00	.....
Choteau	6,747 57	2,000 00	1,719 24	702 97	573 15	.....
Custer	8,474 30	2,481 11	440 79	1,137 83	570 29	.....
Dawson	6,283 74	.....	100 90	1,528 00	171 00	345 00
Deer Lodge	11,777 57	5,141 72	2,658 97	1,645 81	3,196 23	69,891 76
Fergus	7,517 57	2,518 77	848 22	1,001 12	1,973 86	.....
Flathead	7,864 76	2,908 21	900 52	1,746 55	943 54	.....
Gallatin	7,900 00	2,125 00	883 49	4,458 76	491 54	.....
Granite	18,446 86	.....	2,999 04	.....	634 83	.....
Jefferson	6,579 39	2,573 00	1,123 67	131 44	1,434 10	.....
Lewis and Clarke	15,791 00	16,432 66	957 08	6,363 44	2,680 63	.....
Madison	7,000 00	1,374 27	715 00	1,995 32	498 45	17,973 23
Meagher	7,665 41	1,196 04	223 47	743 06	401 46	.....
Minotola	6,749 66	5,450 63	378 52	1,461 57	1,108 60	1,264 90
Missoula	4,573 00	2,433 91	1,402 79	2,071 31	932 06	.....
Park	8,035 21	2,100 00	571 77	800 00	.....	1,271 97
Ravalli	24,047 13	44,987 06	1,537 29	22,647 85	2,809 13	2,108 30
Silver Bow	5,441 66	975 00	1,037 22	913 44	267 20	3,069 63
Sweet Grass	7,105 11	675 00	604 33	1,379 66	259 37	333 06
Teton	5,300 00	390 00	.....	1,366 91	976 77	.....
Valley	11,169 11	.....	1,914 76	1,631 16	1,699 21	.....
Yellowstone .....	.....	.....	.....	.....	.....	.....
Total	\$317,133 21	\$104,931 70	\$23,517 90	\$67,957 34	\$23,761 23	\$26,614 22
						\$14,266 06

* Included in salary of officers.

STATEMENT OF COUNTY EXPENSES 1899.—Continued.

COUNTIES.	OTHER EXPENDITURES.					
	Election expenses.	Bridges, Roads and Highways ..	Interest paid on County bonds	Interest paid on County warrants.	All other expenses.	Total.. .. .
Beaverhead	51,180 20	\$10,722 97	\$4,520 00	\$727 47	.....	\$45,573 55
Broadwater	1,250 34	6,940 54	2,720 00	473 94	2,737 34	25,064 45
Carbon	1,114 20	15,179 61	2,430 00	433 53	3,340 36	64,000 03
Cascade	1,229 03	30,631 90	22,671 18	.....	.....	121,010 70
Chouteau	1,704 33	13,254 27	12,053 85	20 83	9,002 08	57,085 24
Custer	1,593 67	9,605 74	16,440 00	17 80	.....	65,948 49
Dawson	453 65	2,943 37	6,235 63	629 53	2,404 96	32,579 32
Deer Lodge	6,131 07	20,776 05	11,500 00	2,442 77	11,307 26	235,054 54
Fergus	2,037 79	19,301 71	6,000 00	179 61	9,097 66	72,310 71
Flathead	2,303 52	17,613 54	6,000 00	9,713 98	1,802 04	77,851 94
Gallatin	1,701 85	30,091 66	6,714 24	206 61	2,394 90	67,204 25
Granite	2,702 43	16,723 72	.....	.....	.....	61,264 25
Jefferson	2,076 72	12,639 42	15,000 00	7,251 76	1,337 62	60,510 94
Lewis and Clarke ..	2,690 51	19,177 41	10,450 00	1,624 55	15,319 49	164,278 94
Madison	2,985 94	17,617 43	6,600 00	128 09	606 20	76,721 27
Meagher	1,001 51	6,949 44	8,321 12	.....	300 00	36,151 63
Missoula	2,615 14	10,544 89	16,023 60	10,757 53	2,053 39	83,534 63
Park	2,234 20	15,329 16	12,800 00	2,045 11	1,953 05	60,223 61
Ravalli	15,310 43	34,235 56	6,250 00	.....	2,453 26	59,444 84
Silver Bow	603 64	6,428 79	6,700 00	1 38	77,631 72	233,566 72
Sweet Grass	1,165 90	16,415 66	.....	37 30	2,653 04	31,513 04
Teton	1,329 71	12,947 39	4,600 00	1,923 87	2,297 65	52,413 97
Valley	133 26	11,005 93	8,130 75	140 03	2,321 58	46,238 30
Yellowstone .....	.....	.....	.....	.....	.....	61,297 41
Total	\$57,709 66	\$200,190 85	\$200,070 65	\$40,054 98	\$105,194 33	\$2,020,941 09

SEVENTH ANNUAL REPORT OF BUREAU

REVENUE FROM LICENSES, 1898.—Continued.

COUNTIES	Merchants, including Liquors at Wholesale	Oleomargarine and Butterine	Pawnbrokers and Peddlers	Pools on Races	Power & Light Companies	Photographers	Physicians and Surgeons	Street Railways	Telegraphs and Telephones	Theatres	Water Companies	All others	Total	Percent of Total Amount of Li- censes Paid by each County
Beaverhead	\$2,015 00	.....	\$132 50	.....	.....	.....	\$27 00	.....	12 00	\$75 00	.....	\$51 25	\$14,465 00	3.28
Broadwater	773 00	.....	72 00	.....	.....	.....	43 00	.....	.....	.....	.....	.....	6,080 75	1.27
Carbon	485 00	.....	150 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	7,050 50	1.59
Cascade	7,764 55	.....	494 00	.....	275 00	73 50	522 50	201 00	216 00	82 00	322 23	494 15	63,902 27	13.30
Choteau	190 00	.....	13 50	.....	.....	.....	43 00	.....	.....	.....	.....	.....	1,154 25	.36
Custer	1,642 00	.....	.....	.....	.....	.....	5 00	.....	.....	.....	.....	.....	10,841 75	2.44
Dawson	309 00	.....	55 00	.....	.....	.....	35 00	.....	.....	.....	.....	.....	3,730 00	.84
Deer Lodge	6,525 00	.....	335 50	675 00	.....	.....	327 00	102 00	.....	355 00	.....	.....	50,253 75	11.35
Fergus	1,484 30	.....	330 00	.....	25 00	.....	100 00	.....	11 00	.....	.....	.....	11,123 10	2.52
Flathead	121 50	.....	.....	.....	63 00	.....	35 00	100 00	.....	40 00	.....	.....	2,255 00	.73
Gallatin	2,115 00	.....	155 00	.....	.....	.....	100 00	.....	67 25	125 00	.....	.....	13,944 85	3.02
Granite	1,100 00	.....	.....	.....	.....	.....	99 00	.....	11 13	13 50	.....	.....	10,548 55	2.35
Jefferson	1,990 00	.....	.....	.....	.....	.....	100 00	.....	.....	40 00	.....	.....	12,951 50	2.92
Lewis and Clarke	7,612 00	.....	343 50	.....	404 00	64 00	334 00	204 00	137 50	244 00	400 00	427 10	54,044 60	12.10
Madison	83 00	.....	673 00	.....	.....	.....	6 00	.....	.....	.....	.....	.....	652 00	.15
Meagher	330 00	.....	130 00	.....	.....	.....	80 00	.....	.....	5 00	.....	.....	2,154 00	.71
Missoula	2,023 00	.....	40 00	.....	50 00	.....	140 00	.....	.....	955 00	.....	.....	25,455 00	5.29
Park	712 00	.....	.....	.....	.....	.....	50 00	.....	43 75	125 00	104 00	.....	10,131 25	2.30
Ravalli	1,355 00	.....	.....	.....	.....	.....	60 00	.....	9 25	6 00	102 00	.....	7,987 25	1.74
Silver Bow	12,562 00	.....	1,307 50	750 00	600 00	100 00	515 00	150 00	330 00	575 00	600 00	.....	111,329 25	25.13
Sweet Grass	415 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3,095 00	.70
Teton	970 00	.....	60 00	.....	.....	.....	75 00	.....	24 75	.....	.....	.....	6,321 75	1.24
Valley	383 80	.....	50 00	.....	.....	.....	30 50	.....	.....	.....	.....	.....	4,418 70	1.00
Yellowstone	1,890 00	.....	37 50	.....	.....	.....	35 00	.....	125 00	.....	.....	.....	10,236 00	2.66
Total	\$53,796 55	.....	\$4,221 00	\$1,452 00	\$1,321 00	\$297 00	\$2,881 00	\$757 00	\$1,055 63	\$2,580 50	\$1,777 33	\$2,671 35	\$442,946 43	100.00
Per ct. paid by each business	12.14	.....	.35	.22	.34	.09	.65	.17	.23	.53	.40	1.95	100.00	.....

REVENUE FROM LICENSES BY COUNTIES DURING THE FISCAL YEAR ENDED NOVEMBER 30, 1900, AS REPORTED BY COUNTY TREASURERS.

COUNTIES	Assayers	Attorneys	Auction'rs	Bankers	Billiard Tables	Brewers	Builders, Manufacturers, etc.	Butchers	Cigarette selling	Common Carriers	Dentists	Gambling	Hotels, Restaurants, Lodging Houses	Real Estate Agents, Loans and Insurance	Intelligence Offices	Laundries
Beaverhead	29 00	70 00	10 00	30 00	118 75	60 00	.....	54 00	30 00	.....	20 00	.....	170 00	110 00	.....	100 00
Broadwater	15 00	40 00	10 00	30 00	46 00	.....	.....	25 00	.....	.....	.....	.....	125 00	.....	.....	.....
Carbon	605 00	15 00	110 00	110 00	50 00	600 00	.....	.....	215 00	.....	152 60	.....	1,343 00	439 50	.....	280 23
Cascade	81 00	152 00	39 00	152 00	445 75	.....	.....	40 00	.....	.....	50 00	.....	224 00	65 50	.....	131 00
Chouteau	145 00	60 00	60 00	60 00	116 25	.....	.....	15 00	110 00	.....	50 00	.....	170 00	200 00	.....	50 00
Custer	35 00	100 00	30 00	100 00	30 00	.....	.....	35 00	.....	.....	20 00	.....	70 00	60 00	.....	40 00
Dawson	123 00	15 00	1,124 00	1,124 00	174 25	227 00	41 00	418 00	153 00	.....	113 00	.....	785 00	143 00	.....	272 00
Deer Lodge	155 00	5 00	124 17	124 17	61 00	.....	.....	70 20	91 00	12 50	43 50	.....	202 00	115 00	.....	77 60
Fergus	225 00	45 00	40 00	40 00	105 00	90 00	.....	65 00	10 00	.....	81 00	.....	216 00	115 00	.....	125 00
Flathead	128 00	31 00	41 00	41 00	53 50	61 00	.....	65 00	120 00	.....	48 00	.....	286 00	155 00	.....	255 00
Gallatin	40 00	30 00	720 00	720 00	63 00	.....	.....	114 00	165 20	.....	30 00	.....	410 00	68 00	.....	174 00
Granite	1,120 00	45 00	45 00	45 00	115 00	392 00	240 00	163 00	1,200 00	50 00	300 00	.....	1,050 00	105 00	.....	520 00
Jefferson	70 00	40 00	70 00	70 00	70 00	40 00	.....	43 00	.....	.....	30 00	.....	300 00	75 00	.....	60 00
Lewis & Clarke	130 00	130 00	40 00	40 00	60 00	300 00	.....	163 00	120 00	.....	30 00	.....	230 00	100 00	.....	80 00
Madison	40 00	40 00	40 00	40 00	41 25	.....	.....	87 00	120 00	.....	35 00	.....	313 00	55 00	.....	140 00
Mongolian	130 00	910 00	70 00	700 00	273 75	835 00	60 00	113 00	1,320 00	.....	48 00	.....	2,320 00	505 00	140 00	1,575 00
Muskegon	60 00	55 00	10 00	700 00	63 50	.....	.....	.....	.....	.....	270 00	.....	88 00	85 00	.....	80 00
Park	40 00	40 00	40 00	40 00	.....	.....	.....	29 00	.....	.....	35 00	.....	125 00	125 00	.....	60 00
Ravalli	41 00	20 00	.....	.....	.....	.....	.....	48 00	.....	.....	50 00	.....	115 00	115 00	.....	170 00
Silver Bow	80 00	910 00	70 00	700 00	63 50	.....	.....	97 00	240 00	.....	50 00	.....	327 00	110 00	.....	.....
Sweet Grass	40 00	40 00	40 00	40 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Teton	40 00	40 00	40 00	40 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Valley	40 00	40 00	40 00	40 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Yellowstone	85 00	85 00	85 00	85 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total	\$40 00	\$4,154 00	\$21 00	\$3,572 00	\$2,109 25	\$2,516 50	\$141 00	\$2,346 20	\$2,965 00	\$201 00	\$1,543 00	.....	\$2,501 50	\$2,843 00	\$100 00	\$4,130 23
Per ct. paid by each business	.01	.78	.05	.54	.29	.54	.06	.44	.75	.07	.29	.....	1.77	.55	.03	.77

SEVENTH ANNUAL REPORT OF BUREAU

REVENUE FROM LICENSES, 1899—Continued.

COUNTIES	Per Ct. of Total Amt of licenses pd. by each Co.										
	Total	All others	Water Companies	Theatres	Telegraphs and Telephones	Street Railways	Physicians and Surgeons	Photographers	Power & Light Companies	Pools on Races	Pawnbrokers and Peddlers
Beaverhead	\$2,554 00	\$185 75	.....	21 00	4 00	.....	\$51 00	.....	.....	\$235 00	.....
Broadwater	6,382 00	.....	.....	.....	.....	.....	75 00	.....	.....	20 00	.....
Carbon	9,779 00	417 00	.....	30 00	.....	.....	75 00	.....	.....	.....	.....
Cascade	26,327 00	483 46	186 00	140 00	7 75	200 00	530 50	.....	275 00	.....	.....
Choteau	12,763 00	47 00	.....	194 50	.....	.....	101 00	.....	.....	.....	.....
Custer	9,092 82	.....	185 00	30 00	.....	.....	190 00	.....	.....	.....	.....
.....awson	2,460 00	.....	.....	50 00	.....	.....	45 00	.....	.....	.....	.....
Deer Lodge	23,724 00	30 00	150 00	323 00	46 00	200 00	214 00	.....	.....	.....	.....
Fergus	10,441 00	367 00	.....	145 50	37 00	.....	120 00	.....	.....	.....	.....
Flathead	8,979 00	.....	.....	84 00	.....	.....	163 00	.....	.....	.....	.....
Gallatin	9,349 00	.....	.....	143 00	.....	.....	125 00	.....	.....	.....	.....
Granite	11,382 84	.....	.....	163 00	.....	.....	163 00	.....	.....	.....	.....
Jefferson	10,387 80	.....	.....	250 00	.....	.....	135 00	.....	.....	.....	.....
Lewis and Clarke	37,049 00	.....	.....	.....	18 75	.....	165 00	.....	.....	.....	.....
Madison	9,768 00	.....	.....	.....	.....	.....	65 00	.....	.....	.....	.....
Meagher	2,150 00	.....	.....	.....	.....	.....	90 00	.....	.....	.....	.....
Missoula	10,860 00	.....	.....	.....	.....	.....	135 00	.....	.....	.....	.....
Park	11,440 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....Ravalli	6,528 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....Silver Bow	109,440 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....Sweet Grass	8,700 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....Teton	4,800 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....Valley	6,765 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....Yellowstone	15,720 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total	\$387,063 16	\$6,032 35	\$1,968 00	\$2,853 50	\$128 50	\$260 00	\$4,294 00	\$80 50	\$1,651 00	100 00	\$67,634 26
Per ct. paid by each business	74.30	1.29	.25	.56	.04	.12	.20	.10	.31	.02	1.05

TABLE NO. 1.
SHOWING THE SEVERAL CLASSES OF REAL PROPERTY AFTER EQUALIZATION BY COUNTY BOARDS OF
EQUALIZATION FOR THE YEAR 190.

COUNTIES.	Acres of Land	Value of Real Estate	Value of improvements on same ..	Value of city and town lots	Value of improvements on same ..	Value of mining claims	Value of improvements on same ..	Value of telegraph lines	Value of telephone lines	Value of mining and irrigating ditches	Value of depots, round houses, etc	Total value of all real estate and improvements
Beaverhead ..	305,977	\$625,019	\$398,367	\$123,676	\$259,570	\$17,196	\$69,325	\$5,460	\$4,707	.....	\$26,006	\$1,741,515
Broadwater ..	190,163	564,534	309,534	73,419	105,365	.....	.....	6,459	3,673	19,437	10,125	981,646
Carbon	33,074	339,720	319,575	99,979	167,490	.....	.....	1,585	380	34,350	7,350	970,629
Cascade	329,038	2,693,940	1,535,570	8,677,897	1,441,538	23,235	14,600	6,320	21,930	.....	69,390	9,173,443
Chouteau	199,176	323,300	209,410	146,653	316,695	.....	.....	17,030	630	1,325	61,395	1,181,961
Custer	1,115,546	326,859	250,268	200,656	328,990	.....	.....	14,180	.....	1,110	34,406	1,735,686
Dawson	431,550	311,714	61,065	71,053	161,795	.....	.....	5,635	.....	.....	28,075	508,307
Deer Lodge ..	490,226	833,373	1,493,194	1,203,327	1,463,033	43,970	40,130	12,463	9,370	20,900	28,635	3,266,710
Fergus	633,377	1,109,060	495,530	121,023	270,500	19,900	6,000	11,060	1,775	2,300	.....	3,004,307
Fishhead	401,398	1,120,137	190,895	447,673	232,095	.....	.....	.....	.....	1,775	47,945	3,108,955
Gallatin	601,767	2,437,615	475,315	604,746	945,770	32,000	290,145	4,330	3,913	15,400	20,775	4,507,964
Granite	200,147	234,960	307,206	183,177	298,965	45,785	404,101	9,690	2,478	20,915	9,190	1,305,354
Jefferson	305,769	331,503	253,314	273,876	273,943	60,000	271,435	2,075	7,065	57,060	34,965	1,823,773
Lewis and Clarke ..	313,288	1,711,453	1,364,439	3,461,179	3,268,715	36,730	135,150	2,370	11,340	6,060	41,353	10,731,286
Madison	344,197	801,126	472,550	102,605	269,790	8,255	4,300	1,630	3,870	.....	7,060	1,637,435
Meagher	601,541	533,706	190,540	92,445	134,025	.....	.....	1,630	.....	820	2,450	1,576,740
Minneapolis	332,177	1,332,530	301,043	946,080	960,139	.....	.....	3,900	10,152	7,480	26,300	3,835,323
Missoula	331,003	835,554	307,385	613,373	666,728	8,334	.....	1,330	2,104	.....	.....	1,684,000
Part	197,435	252,844	250,405	185,156	192,160	.....	.....	8,345	.....	19,675	48,890	18,005,890
Ravalli	38,256	375,210	675,009	812,990	9,977,790	55,515	323,900	6,000	3,360	.....	10,650	944,745
Silver Bow	471,344	649,671	132,431	73,353	124,075	.....	.....	8,530	2,300	3,000	20,730	781,943
Sweet Grass	174,485	449,243	122,125	62,533	73,075	.....	.....	.....	.....	.....	35,765	306,467
Teton	4,396	13,305	61,166	16,811	55,515	.....	.....	15,575	.....	.....	.....	2,342,544
Valley .....	.....	27,334	190,629	409,019	655,349	.....	.....	.....	4,455	43,680	.....	.....
Yellowstone	810,394	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total	8,677,523	\$7,415,061	\$30,592,000	\$20,366,396	\$19,008,897	\$411,000	.....	\$ 198,304	\$140,055	\$398,142	\$513,526	\$75,173,703

TABLE NO. 2.
SHOWING THE VALUATION OF EACH CLASS OF PERSONAL PROPERTY, THE NUMBER OF EACH CLASS OF STOCK AND THE TOTAL VALUE OF SAME WITH TOTAL VALUE OF ALL PERSONAL PROPERTY EXCEPT RAILROADS IN EACH COUNTY WITHIN THE STATE AFTER EQUALIZATION BY THE COUNTY BOARDS OF EQUALIZATION FOR THE YEAR 1900.

COUNTIES.	Mortgages, bonds etc.....	Express, street railroads gas and electric light comp's ..	Watches, jewelry and plate.....	Furniture and fire arms.....	Musical instruments and sewing machines.....	Libraries	Goods, wares and merchandise consigned goods	Fixtures in saloons etc.....	Farming utensils ..	Machinery	Wagons, Harness, robes, etc
Beaverhead	93,033	.....	\$2,125	\$17,510	\$6,870	\$2,215	161,085	\$22,098	84,723	\$19,359	\$24,351
Broadwater	48,561	.....	1,471	17,745	5,447	590	60,231	4,799	7,097	63,990	23,567
Carbon	45,723	790	685	29,720	7,077	2,255	143,576	11,315	14,439	79,951	53,023
Cascade	59,082	104,067	6,483	125,370	21,689	6,555	527,125	43,747	26,355	312,451	78,485
Chouteau	59,632	.....	2,013	38,900	6,400	785	174,265	9,476	11,739	16,007	65,385
Custer	25,526	.....	4,051	68,123	12,110	4,910	182,309	20,353	23,896	.....	58,579
Dawson	37,828	.....	1,978	27,313	8,715	385	64,700	5,375	923	9,300	15,350
Deer Lodge	24,910	199,422	2,210	27,965	6,835	4,630	428,798	25,690	12,139	63,630	48,765
Fergus	52,092	.....	1,589	32,245	7,315	2,530	393,390	13,424	11,245	91,666	69,115
Flathead	52,465	29,860	1,589	32,805	7,307	1,779	170,405	7,690	19,946	117,946	41,165
Gallatin	300,395	6,000	2,415	44,515	15,315	7,789	221,055	10,865	29,710	34,873	80,325
Granite	65,781	14,100	1,746	13,968	5,465	2,465	98,157	7,777	4,370	34,285	21,140
Jefferson	37,811	.....	4,240	58,325	13,789	3,140	98,176	10,945	7,208	163,229	25,690
Lewis and Clarke	254,375	638,696	14,505	290,325	33,165	30,695	862,975	65,534	3,895	90,406	63,211
Madison	183,617	4,076	4,465	12,330	18,165	1,745	171,730	6,438	3,895	29,855	69,600
Meagher	49,480	1,100	1,315	20,945	5,270	1,300	81,600	5,135	7,550	16,250	26,730
Mineral	214,071	64,700	6,985	78,123	12,399	6,970	353,943	26,093	6,928	85,003	49,039
Missoula	36,732	69,487	2,720	45,697	12,035	4,500	241,445	16,765	15,635	53,875	35,630
Park	93,888	.....	850	19,360	5,450	950	149,735	5,240	5,473	14,230	31,365
Ravalli	329,235	19,424	16,145	102,530	34,310	42,305	497,685	195,630	4,705	694,485	67,850
Silver Bow	36,783	401,410	1,030	15,565	5,100	1,965	86,300	7,445	7,989	11,495	19,225
Sweet Grass	77,467	3,000	410	10,769	1,745	1,250	81,374	3,015	5,245	4,899	22,970
Teton	12,021	.....	3,064	20,010	3,899	1,840	71,638	4,760	831	7,297	17,899
Valley	52,063	60,225	4,897	72,532	14,145	5,340	325,273	27,784	11,346	40,430	36,247
Yellowstone .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total	\$2,498,000	\$1,485,956	\$28,338	\$1,305,790	\$259,216	\$129,690	\$6,467,697	\$638,295	\$259,625	\$1,993,148	\$1,090,616

TABLE NO. 2.—Continued.

COUNTIES	No. head of thr- oughbreds ..	Value....	No. head of range cattle.....	Value....	No. head of mules and common work horses	Value....	No. head of beef ..	Value....	No. of 1, 2 and 3 year olds and stock cattle.....	Value....	No. head of cows ..	Value....	No. head of sheep.	Value....
Beaverhead	47	\$3,648	6,468	\$44,508	2,123	\$54,300	1,300	\$67,300	\$23,614	\$703,097	1,015	\$30,160	115,478	\$217,964
Broadwater	13	1,225	2,465	24,925	1,333	60,084	21	585	8,538	214,565	685	17,500	24,605	105,087
Carbon	20	1,700	2,160	41,400	2,590	94,455	5	235	15,054	306,215	1,831	46,645	125,050	361,237
Cardona	20	1,800	2,390	59,300	4,247	122,075	703	25,690	32,015	730,222	1,000	30,000	163,305	446,534
Chouteau	22	3,360	6,795	67,950	5,945	122,440	1,743	53,390	63,300	1,435,464	646	19,365	548,102	1,233,088
Custer	25	25,290	202,641	303,641	5,236	123,400	.....	.....	67,759	1,463,067	2,409	63,605	338,109	1,010,353
Dawson	80	9,080	9,446	190,394	1,463	40,323	253	8,855	30,447	716,010	333	8,355	169,128	597,394
Deer Lodge	53	3,900	3,605	35,060	2,673	70,065	.....	.....	14,446	323,379	1,540	46,300	67,744	188,329
Fergus	18	2,060	9,349	92,490	4,971	150,606	.....	.....	32,511	191,770	834	15,730	539,583	1,549,579
Ft. Rathen	8	885	1,817	22,985	3,467	62,076	50	3,195	15,045	326,915	2,320	69,135	30,492	60,035
Gallatin	15	1,000	4,702	47,975	4,971	145,005	7	305	7,214	180,596	1,170	39,355	15,465	29,113
Granite	5	660	2,817	35,170	1,085	45,785	111	4,490	20,053	448,095	1,154	31,365	6,379	13,800
Jefferson	10	1,060	2,403	135,060	3,679	73,265	196	7,065	27,303	607,050	1,389	41,160	72,379	301,770
Levi & Clarke	20	1,460	3,332	34,570	3,360	106,380	460	20,300	20,478	248,659	1,382	43,300	157,500	157,500
Madison	530	37,145	30,985	135,060	1,477	35,440	343	8,470	10,900	505,560	833	17,965	252,566	636,100
Meagher	11	1,300	1,734	17,510	1,477	35,440	96	6,040	10,900	248,659	3,172	61,733	2,390	5,390
Missoula	11	975	2,099	17,510	2,797	94,000	15	600	11,415	278,725	1,395	41,700	67,263	157,577
Park	108	20,500	2,094	27,594	2,190	63,100	15	600	10,184	300,235	3,360	67,900	35,494	97,498
Salvati	40	4,300	1,971	13,650	2,231	30,945	785	27,530	6,653	63,000	5,153	69,600	1,351	2,760
Silver Bow	10	975	1,499	14,400	2,622	30,945	17	612	14,361	324,314	329	8,828	279,088	725,043
Sweet Grass	4	1,000	2,045	89,450	1,799	41,495	197	6,312	18,307	414,534	333	8,385	246,361	676,275
Teton	4	1,000	2,718	46,450	1,811	47,085	246	7,380	13,723	304,357	147	5,145	110,629	308,302
Valley	49	4,290	5,135	52,400	1,513	42,740	1,210	47,310	22,945	597,549	849	35,900	237,155	692,124
Yellowstone	49	4,290	5,135	52,400	2,068	58,062	35	1,169	22,945	597,549	849	35,900	237,155	692,124
Total	1,129	\$264,399	130,470	\$1,475,715	42,890	\$1,902,574	8,606	\$397,113	599,661	\$11,817,305	23,659	\$238,626	3,153,061	\$2,813,531

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SEVENTH ANNUAL REPORT OF BUREAU

TABLE NO. 2.—Concluded.

COUNTIES.	No. head of hogs ..	Value.....	Hay, grain and wool.....	Lumber, wood and coal.....	Bank stocks, notes, solvent creditors.	Money	Net proceeds of mines	Any other personal property	Total value of all personal property
Beaverhead	328	\$1,534	\$7,266	\$650	\$108,108	\$23,631	\$24,470	\$7,460	\$1,785,123
Broadwater	413	2,463	7,360	1,371	64,149	.....	1,800	17,134	746,377
Carbon	965	5,971	6,176	6,890	56,757	11,225	.....	33,712	1,411,371
Cascade	226	1,130	.....	.....	125,749	.....	46,770	62,005	2,030,249
Choteau	168	840	2,360	1,404	164,330	46,540	.....	6,289	2,638,523
Custer	219	1,120	.....	.....	223,280	37,510	.....	25,965	2,398,679
Dawson	18	99	.....	.....	13,374	7,808	.....	2,323	1,573,462
Deer Lodge	268	1,290	576	23,238	37,540	118,573	.....	70,405	2,611,069
Fergus	623	2,810	2,000	1,553	22,357	2,387	.....	3,533,567	.....
Flathead	985	5,054	22,050	78,366	46,343	2,455	.....	30,331	881,408
Gallatin	1,243	7,025	18,556	2,156	40,570	32,322	.....	113,218	1,541,065
Granite	106	743	1,773	36,276	12,300	44,734	.....	6,907	618,130
Jefferson	153	831	678	4,320	60,070	11,203	.....	17,512	960,487
Lewis and Clarke	385	1,940	359	11,320	507,539	108,983	.....	113,875	2,297,149
Madison	1,065	6,480	2,655	10,256	267,099	.....	40,035	.....	1,882,897
Meagher	137	410	17,390	510	175,375	5,150	.....	32,329	1,832,519
Missoula	947	3,723	17,141	381,578	153,408	22,629	.....	37,321	1,882,664
Park	631	2,161	2,045	85,951	61,532	22,230	.....	40,375	1,237,368
Patvill	1,782	6,251	1,386	85,951	38,651	22,135	.....	71,854	1,103,300
Silver Bow	483	2,370	2,370	1,463,686	498,026	10,000	13,856,370	256,690	19,332,140
Sweet Grass	176	838	949	3,000	51,266	775	.....	8,674	1,390,364
Teton	72	300	2,164	895	17,350	.....	.....	2,085	1,467,035
Valley	65	305	.....	100	22,802	.....	.....	1,472	926,214
Yellowstone	316	1,472	410	100	67,406	.....	.....	11,277	2,083,625
Total	11,680	\$60,223	\$116,092	\$670,489	\$4,008,955	\$346,470	\$14,163,708	\$1,041,308	\$83,227,735

Average per head for hogs \$6.15

TABLE NO. 3.

STATEMENT SHOWING THE TOTAL ASSESSED VALUATION OF ALL PROPERTY IN EACH COUNTY AFTER EQUALIZATION BY STATE AND COUNTY BOARDS OF EQUALIZATION FOR THE YEAR 1900.

COUNTIES.	Total value of real property.....	Total value of all personal property.....	Total value of railroads assessed by State Board of Equalization.....	Total value of all property assessed.....
Beaverhead	\$1,741,515	\$1,795,122	\$510,130	\$4,046,767
Broadwater	961,646	745,277	247,010	1,973,933
Carbon	970,529	1,411,571	292,741	2,674,841
Cascade	9,172,449	3,090,249	919,064	13,182,761
Choteau	1,181,951	3,689,532	1,442,819	6,314,303
Custer	1,735,686	2,899,679	1,055,429	5,691,794
Dawson	506,307	1,679,492	263,490	2,549,279
Deer Lodge	5,366,710	2,011,999	636,554	8,014,263
Fergus	2,006,347	2,358,567	.....	5,364,914
Flathead	2,108,905	981,405	1,629,222	4,719,532
Gallatin	4,507,964	1,541,005	459,715	6,508,744
Granite	1,805,354	618,120	304,745	2,728,219
Jefferson	1,853,772	950,487	537,070	3,341,329
Lewis and Clarke	30,751,296	2,797,149	708,292	33,256,737
Madison	1,827,485	1,995,907	245,164	4,068,556
Meagher	1,376,740	1,832,510	64,064	3,273,314
Missoula	2,828,223	1,968,654	1,720,295	6,517,172
Park	2,112,345	1,227,998	454,096	3,794,439
Ravalli	1,654,080	1,108,300	165,165	2,927,545
Silver Bow	16,005,890	19,582,140	676,607	36,264,637
Sweet Grass	944,745	1,290,964	302,458	2,538,167
Teton	761,943	1,467,095	681,090	2,910,128
Valley	206,487	325,214	1,081,200	2,612,901
Yellowstone	2,542,544	2,052,625	782,519	5,377,688
Total	\$75,173,763	\$63,227,735	\$15,000,090	\$153,401,588

TABLE NO. 4.

STATEMENT SHOWING THE AMOUNT OF TAXES DUE BY EACH RAILROAD IN THE STATE UPON THEIR LINES AND BRANCHES.

NAME OF ROAD.	Mileage	Tax on railroads	Tax on depots, round-houses, etc.	Tax on land, etc.	Total taxes
Northern Pacific Ry Co. and branches	1,371.23	\$148,703.96	\$6,459.36	\$51,535.10	\$206,702.41
G. N. Ry Co., Pacific Ext. Mont. Central Ry Co. and branches.....	1,066.02	108,999.12	5,792.62	3,414.96	118,206.73
Oregon Short Line R. R. Co.....	126.41	12,034.65	557.14	.....	12,591.79
Montana R. R. Co.	70.66	1,798.15	111.54	.....	1,909.69
Great Falls and Canada Ry Co.....	123.9	3,736.76	549.63	79.57	4,366.96
Big Horn Southern Ry Co.....	101.74	7,985.72	705.72	.....	8,691.44
Butte, Anaconda and Pacific Ry and apurs.....	51.258	6,307.23	945.96	53.00	7,306.21
Yellowstone Park Ry Co.....	11.	225.97	.....	.....	225.97
Totals.....	2,932.208	\$220,520.66	18,121.90	\$55,063.25	\$364,005.83

TABLE NO. 5.
STATEMENT SHOWING RATE OF TAXATION LEVIED ON DIFFERENT FUNDS FOR 1900.

COUNTIES.	Total No. of Mills levied										
	23	24	25	26	27	28	29	30	31	32	33
Bozeman	1-10	1-10	1-10	1-10	1-10	1-10	1-10	1-10	1-10	1-10	1-10
Broadwater	1-10	1-10	1-10	1-10	1-10	1-10	1-10	1-10	1-10	1-10	1-10
Carbon	1-10	1-10	1-10	1-10	1-10	1-10	1-10	1-10	1-10	1-10	1-10
Cascade	1-10	1-10	1-10	1-10	1-10	1-10	1-10	1-10	1-10	1-10	1-10
Chouteau	1-10	1-10	1-10	1-10	1-10	1-10	1-10	1-10	1-10	1-10	1-10
Custer	1-10	1-10	1-10	1-10	1-10	1-10	1-10	1-10	1-10	1-10	1-10
Dawson	1-10	1-10	1-10	1-10	1-10	1-10	1-10	1-10	1-10	1-10	1-10
Deer Lodge	1-10	1-10	1-10	1-10	1-10	1-10	1-10	1-10	1-10	1-10	1-10
Fergus	1-10	1-10	1-10	1-10	1-10	1-10	1-10	1-10	1-10	1-10	1-10
Flathead	1-10	1-10	1-10	1-10	1-10	1-10	1-10	1-10	1-10	1-10	1-10
Gallatin	1-10	1-10	1-10	1-10	1-10	1-10	1-10	1-10	1-10	1-10	1-10
Granite	1-10	1-10	1-10	1-10	1-10	1-10	1-10	1-10	1-10	1-10	1-10
Jefferson	1-10	1-10	1-10	1-10	1-10	1-10	1-10	1-10	1-10	1-10	1-10
Lewis and Clarke	1-10	1-10	1-10	1-10	1-10	1-10	1-10	1-10	1-10	1-10	1-10
Madison	1-10	1-10	1-10	1-10	1-10	1-10	1-10	1-10	1-10	1-10	1-10
Meadow	1-10	1-10	1-10	1-10	1-10	1-10	1-10	1-10	1-10	1-10	1-10
Mineral	1-10	1-10	1-10	1-10	1-10	1-10	1-10	1-10	1-10	1-10	1-10
Missoula	1-10	1-10	1-10	1-10	1-10	1-10	1-10	1-10	1-10	1-10	1-10
Park	1-10	1-10	1-10	1-10	1-10	1-10	1-10	1-10	1-10	1-10	1-10
Ravalli	1-10	1-10	1-10	1-10	1-10	1-10	1-10	1-10	1-10	1-10	1-10
Silver Bow	1-10	1-10	1-10	1-10	1-10	1-10	1-10	1-10	1-10	1-10	1-10
Sweet Grass	1-10	1-10	1-10	1-10	1-10	1-10	1-10	1-10	1-10	1-10	1-10
Teton	1-10	1-10	1-10	1-10	1-10	1-10	1-10	1-10	1-10	1-10	1-10
Valley	1-10	1-10	1-10	1-10	1-10	1-10	1-10	1-10	1-10	1-10	1-10
Yellowstone	1-10	1-10	1-10	1-10	1-10	1-10	1-10	1-10	1-10	1-10	1-10
State	1-10	1-10	1-10	1-10	1-10	1-10	1-10	1-10	1-10	1-10	1-10
Stock Detective and Inspector	1-10	1-10	1-10	1-10	1-10	1-10	1-10	1-10	1-10	1-10	1-10
Stock Indemnity	1-10	1-10	1-10	1-10	1-10	1-10	1-10	1-10	1-10	1-10	1-10
State Bounty	1-10	1-10	1-10	1-10	1-10	1-10	1-10	1-10	1-10	1-10	1-10
Sheep Inspector and Indemnity	1-10	1-10	1-10	1-10	1-10	1-10	1-10	1-10	1-10	1-10	1-10
General Fund	1-10	1-10	1-10	1-10	1-10	1-10	1-10	1-10	1-10	1-10	1-10
Contingent Fund	1-10	1-10	1-10	1-10	1-10	1-10	1-10	1-10	1-10	1-10	1-10
School Fund	1-10	1-10	1-10	1-10	1-10	1-10	1-10	1-10	1-10	1-10	1-10
Bond and Interest Fund	1-10	1-10	1-10	1-10	1-10	1-10	1-10	1-10	1-10	1-10	1-10
Road Fund	1-10	1-10	1-10	1-10	1-10	1-10	1-10	1-10	1-10	1-10	1-10
Poor Fund	1-10	1-10	1-10	1-10	1-10	1-10	1-10	1-10	1-10	1-10	1-10
Bridge Fund	1-10	1-10	1-10	1-10	1-10	1-10	1-10	1-10	1-10	1-10	1-10
Sinking Fund	1-10	1-10	1-10	1-10	1-10	1-10	1-10	1-10	1-10	1-10	1-10
County Free High School	1-10	1-10	1-10	1-10	1-10	1-10	1-10	1-10	1-10	1-10	1-10
Total No. of Mills levied	23	24	25	26	27	28	29	30	31	32	33

Representative Districts and Apportionment.

Each County is entitled to one Senator.

COUNTIES.

Beaverhead	2
Broadwater	2
Carbon	1
Cascade	5
Choteau	2
Custer	2
Dawson	1
Deer Lodge	6
Fergus	2
Flathead	2
Gallatin	2
Granite	2
Jefferson	2
Lewis and Clarke	7
Madison	2
Meagher	2
Missoula	4
Park	2
Ravalli	2
Silver Bow	12
Sweet Grass	1
Teton	1
Valley	1
Yellowstone	1
Total	70
One Senator from each County	31
Total Membership of Seventh Legislative Assembly..	91

NATURALIZATION—1898.

STATEMENT SHOWING THE NUMBER AND NATIVITY OF PERSONS TO WHOM FINAL NATURALIZATION PAPERS WERE ISSUED DURING THE CALENDAR YEAR 1898, AS REPORTED BY CLERKS OF THE DISTRICT COURTS.

COUNTIES.	c't of persons naturalized in each county...		Per cent of persons naturalized in each county.....	
	1897	1898	1897	1898
Beaverhead	6	14	1.47	3.4
Broadwater	2	18	.49	4.2
Carbon	7	72	1.72	17.2
Cascade	46	14	11.27	3.4
Choteau	15	354	3.68	88.4
Custer	1	44	1.76	11.2
Dawson	31	1	7.60	.25
Deer Lodge	5	238	1.20	59.8
Fergus	24	1	5.88	.25
Flathead	1	65	.25	16.2
Gallatin	1	50	.25	12.5
Granite	1	36	.25	9.4
Jefferson	1	29	.25	7.2
Lewis and Clarke	1	18	.25	4.4
Madison	1	138	.25	34.2
Meagher	1	18	.25	4.4
Minneapolis	1	18	.25	4.4
Park	1	71	.25	17.7
Raynolds	1	2	.25	.6
Silver Bow	1	2	.25	.6
Sweet Grass	1	14	.25	3.4
Teton	1	117	.25	29.2
Valley	1	31	.25	7.7
Yellowstone	1	34	.25	8.4
Total	354	54,299	100.00	100.00
All other countries	1	1	.25	.25
Wales	1	1	.25	.25
Switzerland	1	1	.25	.25
Sweden	1	1	.25	.25
South America	1	1	.25	.25
Scotland	1	1	.25	.25
Sandwich Islands	1	1	.25	.25
Russia	1	1	.25	.25
Norway	1	1	.25	.25
Italy	1	1	.25	.25
Ireland	1	1	.25	.25
Germany	1	1	.25	.25
France	1	1	.25	.25
Finland	1	1	.25	.25
England	1	1	.25	.25
Denmark	1	1	.25	.25
Cuba	1	1	.25	.25
Canada	1	1	.25	.25
Bohemia	1	1	.25	.25
Belgium	1	1	.25	.25
Austria	1	1	.25	.25

NATURALIZATION—1899.
STATEMENT SHOWING THE NUMBER AND NATIVITY OF PERSONS TO WHOM FINAL NATURALIZATION PA-
PERS WERE ISSUED DURING THE CALENDAR YEAR 1899, AS REPORTED BY CLERKS OF THE DISTRICT
COURTS.

COUNTRIES.	Per cent of natural- izations in each county.....		Total	
	1898	1899	1898	1899
Beaverhead	34	6	2	2
Broadwater	56	14	15	15
Carbon	56	14	15	15
Cascade	14	14	15	15
Choteau	44	19	19	19
Custer	176	8	2	2
Dawson	140	2	2	2
Deer Lodge	39	13	3	3
Fergus	932	25	25	25
Flinthead	240	35	35	35
Gallatin	240	35	35	35
Granite	144	17	17	17
Jefferson	99	1	1	1
Lewis and Clarke	72	1	1	1
Madison	541	29	29	29
Meagher	72	1	1	1
Missoula	89	4	4	4
Park	268	15	15	15
Ravalli	272	13	13	13
Silver Bow	140	1	1	1
Sweet Grass	35	35	35	35
Teton	1171	2	2	2
Valley	488	3	3	3
Yellowstone	116	2	2	2
Total	300,000	240,000	240,000	240,000
All other countries	1	1	1	1
Wales	1	1	1	1
Switzerland	1	1	1	1
Sweden	1	1	1	1
South America	1	1	1	1
Scotland	1	1	1	1
Sandwich Islands	1	1	1	1
Russia	1	1	1	1
Norway	1	1	1	1
Italy	1	1	1	1
Ireland	1	1	1	1
Germany	1	1	1	1
France	1	1	1	1
Finland	1	1	1	1
England	1	1	1	1
Denmark	1	1	1	1
Cuba	1	1	1	1
Canada	1	1	1	1
Bohemia	1	1	1	1
Belgium	1	1	1	1
Austria	1	1	1	1

CIVIL AND CRIMINAL ACTIONS.

STATEMENT SHOWING BY COUNTIES AND JUDICIAL DISTRICTS CIVIL AND CRIMINAL CASES, ADMINISTRATIONS AND GUARDIANSHIPS BEGUN, DISPOSED OF AND PENDING AND EXECUTIONS, FORECLOSURES AND ORDERS OF SALE ISSUED DURING THE CALENDAR YEAR 1898, AS REPORTED BY CLERKS OF THE DISTRICT COURTS.

COUNTIES											
	1	2	3	4	5	6	7	8	9	10	11
Judicial Districts.....	1	2	3	4	5	6	7	8	9	10	11
Orders of sale during the year.....	54	52	21	20	7	6	17	17	4	1	2
Decreases of foreclosure issued during the year.....	70	91	69	24	9	8	17	20	17	11	10
Executions issued during the year.....	95	31	17	24	8	14	7	17	14	10	6
Guardianships pending Dec. 31, 1898.....	25	2	3	1	2	1	1	1	1	1	1
Guardianships disposed of during the year.....	19	21	6	2	3	1	1	1	1	1	1
Guardians appointed during 1898.....	29	21	6	2	3	1	1	1	1	1	1
Guardianships pending Dec. 31, 1897.....	68	155	228	79	17	21	33	17	33	17	33
Administrations pending Dec. 31, 1898.....	45	84	48	34	10	9	9	9	9	9	9
Estates settled during the year.....	178	134	67	23	10	9	9	9	9	9	9
Letters of Administration issued during 1898.....	11	11	11	11	11	11	11	11	11	11	11
Administrations pending Dec. 31, 1897.....	10	10	10	10	10	10	10	10	10	10	10
Criminal cases pending Dec. 31, 1898.....	16	36	11	11	11	11	11	11	11	11	11
Number of persons tried and acquitted of criminal charges.....	18	29	11	11	11	11	11	11	11	11	11
Criminal cases dismissed, nolle prossed, etc.....	6	5	5	5	5	5	5	5	5	5	5
Commitments to State Insane Asylum.....	6	5	5	5	5	5	5	5	5	5	5
Commitments to State Reform School.....	15	15	15	15	15	15	15	15	15	15	15
Convictions for misdemeanors.....	5	13	13	13	13	13	13	13	13	13	13
Convictions for felonies.....	5	13	13	13	13	13	13	13	13	13	13
Criminal cases appealed from lower court.....	5	13	13	13	13	13	13	13	13	13	13
Crim. cases begun by indictment and information during 1898.....	5	13	13	13	13	13	13	13	13	13	13
Criminal cases pending Dec. 31, 1897.....	5	13	13	13	13	13	13	13	13	13	13
Civil cases pending Dec. 31, 1898.....	319	665	597	56	27	114	27	114	27	114	27
Civil cases disposed of during year 1898.....	303	721	597	56	27	114	27	114	27	114	27
Civil cases begun during calendar year 1898.....	315	701	597	56	27	114	27	114	27	114	27
Civil cases pending Dec. 31, 1897.....	303	721	597	56	27	114	27	114	27	114	27
Total.....	2032	2470	2297	2099	115	472	46	297	39	116	151
Total for 1897.....	2028	2019	3520	3028	139	411	104	194	63	124	158
Increase or Decrease ..	4	349	1223	71	23	61	68	23	16	24	7

DIVO

NUMBER OF DIVORCES GRANTED IN CALENDAR YEARS 1897, 1898 AND 1899
 CENSES ISSUED DURING SAME PERIODS, AS

COUNTIES.	Granted upon complaint of wife ...		Granted upon complaint of husband		Total number granted.....		Per cent of divorces granted in the several counties		Marriage licenses issued during the year	
	1897	1898	1897	1898	1897	1898	1897	1898	1897	1898
Beaverhead	5	3	3	1	8	4	2.72	1.37	42	51
Broadwater	1	1	.....	.....	.....	1	.....	.34	7	13
Carbon	4	1	4	2	8	3	2.72	1.03	44	60
Cascade	26	31	9	6	34	37	11.56	12.72	300	235
Choteau .....	.....	7	1	3	1	10	.34	3.44	50	48
Custer	5	4	3	2	8	6	2.72	2.06	62	40
Dawson	4	3	3	.....	7	3	2.38	1.00	17	13
Deer Lodge	13	12	5	1	18	13	6.12	4.47	157	100
Fergus	3	3	2	.....	5	3	1.70	1.00	34	47
Flathead	13	10	2	4	14	14	4.76	4.81	34	66
Gallatin	3	9	4	4	7	13	2.38	4.47	72	73
Granite	3	2	1	2	4	4	1.36	1.37	11	19
Jefferson	1	2	1	.....	2	2	.67	.68	37	23
Lewis and Clarke	23	20	8	10	30	30	10.20	10.22	178	220
Madison	4	5	.....	1	4	6	1.36	2.06	57	23
Meagher	2	1	.....	.....	2	1	.68	.34	15	13
Missoula	18	12	4	3	22	15	7.49	5.16	90	95
Park	14	8	1	5	15	12	5.10	4.47	53	65
Ravalli	6	5	2	2	8	7	2.72	2.41	54	56
Silver Bow	58	70	19	18	77	88	26.20	30.24	451	530
Sweet Grass	1	2	.....	1	1	3	.34	1.03	14	24
Teton	4	.....	3	3	7	3	2.38	1.03	23	17
Valley .....	.....	2	2	.....	2	2	.68	.68	16	21
Yellowstone	6	9	4	1	10	10	3.43	3.44	53	63
Totals	214	222	80	60	294	291	.....	.....	1730	1984
Per cent	72.79	76.29	27.21	23.71	.....	.....	100.00	100.00	.....	.....

JAIL INCARCERATIONS IN MONTANA, 1898.

Statement showing by counties the number and sex and nature of offense charged against persons confined in the jails of Montana during the calendar year 1898, as reported by sheriffs; also showing the increase or decrease as compared with the year 1897, and the per cent of incarcerations in each county to the total incarcerations in the state for 1898.

COUNTIES.	White.			Colored.			Indians.			Total Confined During the Year.....	Days Confined.		Off. Charg'd Misdemeanors.....	Held Over Felonies for Action of District Court.....	Witnesses Held.....	Insane Temporarily in Custody of Sheriff...	Per Cent. of Incarcerations for each County to the Total Incarcerations in State, 1898.	Paupers fed and lodged over Night, Sick, etc.
	Male.....	Female.....	Total.....	Male.....	Female.....	Total.....	Male.....	Female.....	Total.....		Average No. Days Each Confined...	Total No. Days all Confined.....						
Beaverhead	54	1	55	1	.....	1	.....	.....	.....	56	12.5	1,596	49	7	88	1	1.23	.....
Broadwater	13	1	14	.....	.....	.....	.....	.....	.....	14	4.7	66	6	4	.....	4	1.23	.....
Carbon	172	14	186	3	.....	3	.....	.....	.....	184	6.151	6,151	161	30	30	3	4.43	.....
Cascade	26	2	28	2	.....	2	.....	.....	.....	108	2.325	2,325	42	20	.....	2	2.47	13
Chouteau	74	8	82	2	.....	2	.....	.....	.....	84	12.0	1,200	45	32	.....	7	1.81	.....
Custer	7	.....	7	.....	.....	.....	.....	.....	.....	7	136	22.0	4	.....	.....	16	1.16	.....
Dawson	285	17	302	13	.....	13	.....	.....	.....	414	27.6	11,440	265	34	4	21	9.44	.....
Deer Lodge	79	1	80	1	.....	1	.....	.....	.....	80	.....	.....	61	15	.....	4	1.33	.....
Fergus	256	4	260	.....	.....	.....	.....	.....	.....	346	4.313	12.4	219	23	2	1	7.89	.....
Flathead	69	2	71	3	.....	3	.....	.....	.....	65	1.968	1,968	24	23	.....	4	1.46	.....
Gallatin	21	2	23	.....	.....	.....	.....	.....	.....	23	349	15.3	6	11	1	6	1.33	.....
Granite	73	3	76	.....	.....	.....	.....	.....	.....	83	1.546	1,546	15	6	.....	3	1.81	.....
Jefferson	209	12	221	10	4	14	2	.....	.....	278	7.915	2,215	178	71	2	26	6.34	.....
Lewis and Clarke	26	2	28	1	.....	1	.....	.....	.....	29	1.024	1,024	10	14	.....	3	1.33	.....
Madison	27	2	29	.....	.....	.....	.....	.....	.....	29	5.5	550	19	20	.....	6	1.83	.....
Meagher	601	16	617	10	7	17	25	3	.....	723	9.105	6,105	62	23	.....	3	13.48	.....
Missoula	164	1	165	.....	.....	.....	.....	.....	.....	165	2.124	2,124	145	14	3	2	2.59	.....
Park	14	.....	14	.....	.....	.....	.....	.....	.....	28	145	145	14	6	.....	3	1.33	.....
Ravalli	39	.....	39	1	.....	1	.....	.....	.....	41	373	373	12	14	.....	2	1.33	.....
Silver Bow	1072	241	1313	136	45	181	9	.....	.....	1294	26.576	26,576	923	28	12	121	24.28	.....
Sweet Grass	17	.....	17	.....	.....	.....	.....	.....	.....	17	28	28	11	3	.....	3	1.33	.....
Teton	24	1	25	.....	.....	.....	.....	.....	.....	23	368	368	24	3	.....	1	1.33	.....
Valley	13	.....	13	.....	.....	.....	.....	.....	.....	1	1,015	1,015	69	18	.....	.....	1.33	.....
Yellowstone	73	2	75	6	.....	6	.....	.....	.....	90	23.9	2,050	23	1	1	7	2.95	.....
Total	3996	229	4224	194	431	237	91	14	105	4,386	19.156	81,356	623	125	125	223	100.00	83
Total for year 1897	3328	257	3585	54	54	108	65	11	76	3888	19.391	74,000	572	75	244	244	99.96	.....
Increase or decrease	367	102	469	19	9	28	26	3	29	498	.....	7,215	.....	.....	.....	.....	.....	.....
Per cent of total incarceration, 1898	54.33	7.99	51.72	4.43	1.44	5.87	2.06	.32	2.40	.....	.....	.....	.....	.....	.....	.....	.....	.....

Per cent of increase of total incarcerations over the year 1897, 12.62.

* Court House Burned—Records Destroyed.

** Chinese

*** Half breeds.

**** Black.

JAIL INCARCERATIONS IN MONTANA, 1899.

Statement showing by counties the number and sex and nature of offense charged against persons confined in the jails of Montana during the calendar year 1899, as reported by sheriffs; also showing the increase or decrease as compared with the year 1898, and the per cent of incarcerations in each county to the total incarcerations in the state for 1899.

COUNTIES.	White.			Colored.			Indians.			Days Confined	Off. Chgd.	Witnesses Held.	Insane Temporarily in Custody of Sheriff...	Per Cent. of Incarcerations for each County to the Total Incarcerations in State, 1899.	Lodged and Fed.							
	Total			Total			Total									Total No. Days all Confined.....	Average No. Days Each Confined...					
	Male	Female	Total	Male	Female	Total	Male	Female	Total													
Beaverhead	43	1	44	4	1	5	4	1	5	1,014	21.6	29	.....	.....	1.00	.....						
Broadwater	9	1	10	1	1	2	1	1	2	231	25.7	17	.....	.....	1.00	.....						
Carbon	15	1	16	1	1	2	1	1	2	321	61.0	2	.....	.....	1.00	.....						
Cascade	125	10	135	5	1	6	1	1	2	935	32.3	139	.....	.....	2.00	.....						
Choteau	111	3	114	1	1	2	1	1	2	1,739	14.0	75	.....	.....	2.00	.....						
Custer	43	1	44	2	1	3	2	1	3	1,165	25.3	39	.....	.....	1.00	.....						
Dawson	10	1	11	1	1	2	1	1	2	808	41.0	10	.....	.....	1.00	.....						
Deer Lodge	401	40	441	15	3	18	20	3	23	12,130	26.1	297	.....	.....	10.00	.....						
Fergus	74	1	75	4	1	5	1	1	2	465	25.7	67	.....	.....	1.75	.....						
Flathead	447	6	453	4	1	5	35	7	42	2,653	8.3	449	.....	.....	10.00	.....						
Gallatin	53	1	54	4	1	5	1	1	2	1,121	20.6	39	.....	.....	1.25	.....						
Granite	55	3	58	1	1	2	1	1	2	778	24.3	19	.....	.....	1.25	.....						
Jefferson	55	1	56	1	1	2	1	1	2	894	16.0	47	.....	.....	1.25	.....						
Lewis and Clarke	204	24	228	13	7	20	7	7	14	7,729	30.5	143	.....	.....	6.13	.....						
Madison	15	1	16	1	1	2	1	1	2	1,145	67.6	6	.....	.....	1.25	.....						
Miner	15	1	16	1	1	2	1	1	2	283	14.6	12	.....	.....	1.25	.....						
Missoula	65	10	75	4	3	7	13	4	17	7,134	10.3	673	.....	.....	15.30	.....						
Park	228	6	234	1	1	2	4	3	7	4,780	12.7	139	.....	.....	7.13	.....						
Revel	149	2	151	1	1	2	1	1	2	1,245	8.6	6	.....	.....	11	.....						
Silver Bow	911	156	1,067	115	2	117	5	1	6	25,782	30.5	223	.....	.....	27.41	.....						
Sweet Grass	41	1	42	3	2	5	2	2	4	813	11.2	38	.....	.....	1.00	.....						
Teton	23	1	24	1	1	2	1	1	2	1,108	22.1	38	.....	.....	1.00	.....						
Valley	64	1	65	1	1	2	1	1	2	1,450	22.1	52	.....	.....	1.00	.....						
Yellowstone	23	1	24	4	3	7	3	3	6	1,274	20.3	59	.....	.....	1.00	.....						
Total	2890	290	3180	53	104	157	343	104	447	85,396	17.59	613	74	253	100.00	41						
Total for 1898	2895	239	3134	63	257	290	327	81	408	81,365	19.50	603	130	253	.....	31						
Increase or decrease	225	16	241	5	10	15	16	12	39	3,991	.....	40	44	15	.....	2						
Per cent of total incarceration, 1899	55.34	6.00	61.34	1.55	3.27	5.32	21	2.57	.....	.....	.....	.....	.....	.....	.....	.....						

Per cent of increase of total incarcerations over the year 1898, 4.72.

PENITENTIARY

STATEMENT SHOWING BY COUNTIES, THE OFFENCES FOR WHICH PRIS
LODGE DURING THE

CRIME FOR WHICH CONVICTED.	Deverhead	Broadwater	Carbon	Cascade	Cherokee	Custer	Dawson
Abortion							
Assault 1st degree.....						1	
Assault 2nd degree.....			3		1		
Burglary 1st degree.....				3	1		
Burglary 2nd degree.....	3					4	
Embezzlement							
Escaping from State Prison							
Forgery				1	1	3	
Grand Larceny				5	3	7	3
Grand Larceny attempt to commit							
Injuring Public Jail							
Mayhem							
Manslaughter							
Misappropriating of Bank Funds							
Murder in 2nd degree						4	
Perjury							
Petit Larceny, 2nd conviction					1		
Prizefighting							
Rape						1	
Rape attempt to commit							
Robbery							
Secreting Public Record							
Sodomy							
Receiving Stolen Property							
Total commitments 1896	3		3	9	7	30	3
On hand December 31st 1897	11	1	5	26	30	21	2
Total	14	1	8	37	37	41	5
Discharged 1896, term expired			2	1	3	7	
Discharged during 1896, diminution of sent.	1	1		10	3	10	
Discharged during 1896, pardon	3			3		2	
Discharged during 1896, order of court				1			
Escaped					1		
Died	1						
Total discharged, etc	4	1	2	15	13	19	
Total number of prisoners, Dec. 31st, 1896..	10		6	22	15	22	5
Percentage of commitments, each county. 1896.....	1.83		1.63	4.06	3.56	10.15	1.83

Note.—373, given in above report as the total number of prisoners on hand at December 31st, 1896, should be 363. The seeming discrepancy is caused by erroneously including 4 United States prisoners in the report for the previous year (1897.)

INCARCERATIONS.

CONVICTS WERE COMMITTED TO THE MONTANA STATE PRISON, AT DEER
CALENDAR YEAR 1902.

Deer Lodge	Fergus	Great Bend	Gallatin	Granite	Jefferson	Lewis and Clark ..	Madison	Meagher	Missoula	Park	Ray	Silver Bow	Sweet Grass	Teton	Valley	Yellowstone	Total	Percentage of con- victs during 1902 classified by crime.
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2.54
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	7.61
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	16.75
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	11.16
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	3.06
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	28.43
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	11.16
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	.51
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.53
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	.51
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2.04
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	6.00
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.01
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	.51
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.53
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	.51
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2.55
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	.51
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	.51
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	.51
23	4	18	6	1	4	13	6	1	13	4	4	19	6	3	5	13	197	100.00
34	3	10	11	6	10	51	11	2	25	2	3	65	7	3	4	17	245	.....
67	7	28	17	7	14	64	17	3	37	12	7	74	13	6	9	30	545	.....
6	2	2	1	3	1	3	1	1	1	1	1	1	1	1	1	1	33	.....
9	3	4	2	8	6	1	1	1	1	1	1	1	1	1	1	1	101	.....
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	25	.....
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	4	.....
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	4	.....
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	3	.....
19	1	6	7	3	9	15	7	2	9	4	2	23	2	1	4	7	173	.....
48	6	23	10	4	5	49	10	1	29	8	5	82	11	5	5	23	373	.....
16.75	2.04	9.14	3.04	.51	2.04	6.80	3.04	.51	6.09	3.04	3.04	9.64	3.04	1.52	3.54	6.00	100.00	.....

STATEMENT SHOWING BY COUNTIES THE OFFENCES FOR WHICH PRIS
CALENDAR

CRIME FOR WHICH CONVICTED.	Deaverhead	Broadwater	Ctrb D	Cascade	Chouteau	Custer	Dawson
Abortion							
Assault, 1st degree					1		
Assault, 2nd degree					1		1
Burglary, 1st degree					1	1	
Burglary, 2nd degree					1		
Destroying Registered Letter							
Embezzlement							
Forgery					3	7	
Grand Larceny					3	1	1
Gambling							
Injuring Public Jail	2						
Manslaughter				1		1	
Murder, 2nd degree					2		
Mailing Obscene Letter							
Misappropriation of Bank Funds							
Perjury					1		
Petit Larceny, 2nd conviction					2		
Robbery					1		
Uttering Fictitious Check							
Receiving Stolen Property							
Mayhem							
Rape	1						
Sodomy							
Having Counterfeit Coin in Possession							
Bigamy							
Arson, 2nd degree							
Branding with intent to steal	2						
Assault with corrosive chemicals							
Total commitments during year 1899	5			12	15	3	1
On hand December 31st, 1899							
Total							
Discharged during 1899, term expired	2		1	5	3	2	
Discharged during 1899, diminution of sent.	2		3	6	4	5	1
Discharged during 1899, pardon					1		
Discharged during 1899, order of court						2	
Escaped							
Died						1	
Inmate, removed to State Asylum							
Total died, discharged, pardoned, escaped, etc	4		4	11	2	11	1
Total number of prisoners in confinement December 31st, 1899							
Per centage of commitments from each County during 1899	3.25			2.11	2.15	2.00	.57

[illegible]

INSANE ASYLUM

REPORT OF COMMITMENTS

COUNTIES.	Primary Mental Deterioration.	Alcoholic Dementia	Chronic Confusion at Insanity.	Chronic Delusional Insanity.	Epilepsy.	Psychic Dementia	Paranoid Insanity	Hysterical Insanity	Insanity of Puber- tence.	Idiocy.
Beaverhead				1						
Broadwater	1				1					
Carbon	1									
Cascade	1				1					
Choteau	1				1					
Custer	2									
Dawson										
Deer Lodge	3						1			
Fergus										
Flathead	1			1						
Gallatin	1									
Granite	2				1					
Jefferson	8							1		
Lewis and Clarke ..	1									
Madison	1									
Meagher	1			1						
Missoula				1						1
Park	1				1					
Ravalli				1						
Silver Bow	3		1	1						1
Sweet Grass				1						
Teton										
Valley										
Yellowstone					1					
Total during year	34		1	5	3		1	1	2	2
Number of inmates Dec. 31, 1897	26	5	25	22	9	6	1			22
Grand Total	60	5	26	27	12	6	2	1	2	24
Number discharged in 1898	11				3		1	2		
Number died during 1898	1		1		2					1
Number escaped during 1898				1						
Total discharged, died and escaped 1898 ..	12		1	3	5		1	2		1
Total Number of inmates Dec. 31, 1898	48	5	26	26	10	6	2	1	2	23

SEVENTH ANNUAL REPORT OF BUREAU

REPORT OF COMMITMENTS

COUNTIES.	Primary Detention	Mental	Malacochols	Primary Dementia	Secondary Dementia	Terminal Dementia	Primary Confusion at Insanity	Secondary Confusion at Insanity	Chronic Confusion at Insanity	Primary Delusion at Insanity	Secondary Delusion at Insanity	Chronic Delusion at Insanity
Beaverhead						1						1
Broadwater	1	1	3									
Carbon												
Cascade	1		1									
Choteau												
Custer	3	1								1		1
Dawson	1											
Deer Lodge	5	1	3							4		
Fergus		1	3									
Flathead	1		2									1
Gallatin	3									1		
Granite	1		2									
Jefferson										1		1
Lewis and Clarke	3	1	3							6		
Madison			1									1
Meagher												
Missoula	1	1	1	1						1		2
Park	1		5							3		
Ravalli	2		1							3		
Silver Bow	2	4	4							8	1	1
Sweet Grass		1	2									1
Teton	2									1		
Valley												
Yellowstone	2		1							3		1
Blackfeet Indian Reservation..		1										
State Penitentiary										1		
United States Penitentiary												
Total committed during year 1899, classified by disease	26	12	90	1		1				37	1	10
Total in Asylum Dec. 31, 1899, classified by disease	4	7	74	2	17	15		25	47	26	129	
Total	30	19	164	3	17	16		25	84	27	129	
No. discharged during 1899, classified by disease	14	6	19	1				1	15	1	6	
No. escaped during 1899, classified by disease	3		3						6		2	
No. died during 1899, classified by disease	2	6	2		2	7			1		3	
Total number discharged, died and escaped, 1899	18	12	25	1	3	7		1	22	1	10	
Total number of patients in asylum Dec. 31, 1899, classified by disease..	12	7	79	2	14	9		24	62	26	129	

AT THE INSANE ASYLUM FOR 1899.

Total No. each Co. in Asylum 1899..	Number Discharged 1899..	Number Died 1899..	Number Discharged Improved 1899..	Number Discharged Recovered 1899..	Per Cent Patients from respective counties 1899.	Total Committed during year 1899	Not Insane..	Idiocy..	Imbecility..	Senile Dementia..	Hysterical Insanity	Paralytic Dementia..	Syphilitic Dementia..	Alcoholic Dementia	Stuporous..	Homicidal Insanity	Traumatic Insanity	Periodical Insanity	Epileptic..	Parasitic ..
21	1	1	1	1	2.10	3				1										
2	1	1	1	1	2.60	3		1												
8					2.10	3														
25	4	2	2	2	4.20	9			1											
13	2	2	2	2	.00	1														
15	2	2	2	2	4.20	6														
3					.00	1														
63	5	3	4	1	10.40	15		1												
11	1	1	1	1	2.80	4														
6	1	1	1	1	2.80	4														
21	1	1	1	1	2.80	4														
7					2.80	4														
17			1	1	1.60	2														
62	2	4	7	4	10.40	15		1												
10	1				1.60	2														
14																				
47	1	1	1	1	7.00	10		1												
14	2	1			5.00	3														
6	1				5.00	2														
90	6	6	7	3	13.10	26		3				1								
7					2.80	4														
8	1				2.10	2														
1																				
14	1	2	1	2	4.90	7														
1					.00	1														
1																				
2																				
421	13	36	51	22	100.00	143		6	1		3	3	1						3	
						490		27			5	2	1							
						603		43	1		6	3	1							
						73					1	1	1							
						13														
						36						1								
						123					1	2								
						481		43	1		4	1	1							

OFFICIAL DIRECTORY.

CONGRESSIONAL DELEGATION.

Office.	Name.	Residence.	Term Expires.
United States Senator	W. A. Clark	Butte	March 3, 1907.
Representative in Congress ..	Caldwell Edwards ..	Bozeman.. . . .	March 3, 1903.

*Elected to succeed T. H. Carter.

Officers and Members of the Seventh Legislative Assembly.

Regular Sessions Convene at 12 o'clock on the first Monday in January, each odd numbered year.—Limit of Session 60 Days.

Governor J. K. TOOLE.
 Lieutenant-Governor and President of the Senate FRANK G. HIGGINS.

MEMBERS OF THE SENATE OF THE SEVENTH LEGISLATIVE ASSEMBLY.

Counties.	Name	Politics	Address	Elected	Term Office
Beaverhead	James P. Murray	Democrat.....	Dillon	Nov. 6, 1900	4 years
Broadwater	W. E. Tierney ...	Democrat.....	Townsend ...	Nov. 6, 1900	4 years
Carbon	W. F. Meyer	Republican.....	Red Lodge ...	Nov. 6, 1900	4 years
Cascade	Geo. H. Stanton ..	Democrat.....	Great Falls ...	Nov. 6, 1900	4 years
Choteau	B. D. Phillips....	Republican.....	Phillips	Nov. 6, 1900	4 years
Custer.....	Kenneth McLean..	Republican.....	Miles City	Nov. 6, 1900	4 years
Dawson	Thos. P. Cullen..	Democrat.....	Glendive	Nov. 6, 1900	4 years
Deer Lodge	J. M. Kennedy ..	Democrat.....	Anaconda	Nov. 6, 1900	4 years
Fergus	S. S. Hobson	Republican.....	Lewistown ...	Nov. 6, 1900	4 years
Flathead	J. H. Geiger	Republican.....	Libby	Nov. 6, 1900	4 years
Galatin	C. W. Hoffman ..	Democrat.....	Bozeman	Nov. 6, 1900	4 years
Granite	Jerry Connolly ..	Populist.....	Garnet	Nov. 6, 1900	4 years
Jefferson	D. G. Warner.....	Democrat.....	Boulder	Nov. 6, 1900	4 years
Lewis and Clarke	W. M. Biggs	Democrat.....	Helena	Nov. 6, 1900	4 years
Madison	W. A. Clark	Democrat.....	Virginia City ..	Nov. 6, 1900	4 years
Meagher	E. J. Anderson ..	Republican.....	White Sul. Springs	Nov. 6, 1900	4 years
Missoula	Tyler Worden	Republican.....	Missoula	Nov. 6, 1900	4 years
Park	J. M. Conrow	Democrat.....	Livingston	Nov. 6, 1900	4 years
Ravalli	H. L. Myers	Democrat.....	Hamilton	Nov. 6, 1900	4 years
Silver Bow.....	T. F. Courtney ..	Democrat.....	Butte	Nov. 6, 1900	4 years
Sweet Grass	J. N. Kelley	Republican.....	Hunters Hot Springs	Nov. 6, 1900	4 years
Teton	S. L. Mitchell	Republican.....	Choteau	Nov. 6, 1900	4 years
Valley	A. W. Mahon	Democrat.....	Glasgow	Nov. 6, 1900	4 years
Yellowstone	C. O. Greunwell ..	Democrat.....	Billings	Nov. 6, 1900	4 years

HOUSE OF REPRESENTATIVES.

Counties.	Name.	Politics.	Address.	Term Office
Beaverhead	D. El. Metlen	Democrat...	Dillon.....	2 years
Broadwater.....	Emerson Hill	Democrat...	Red Rock	2 years
Carbon	Lloyd Cannon	Democrat...	Winston	2 years
Cascade.....	A. B. Rosman	Democrat...	Radersburg.....	2 years
	C. H. Gregory	Republican..	Cobo	2 years
	H. P. Thoroughman ..	Democrat...	Cascade	2 years
	George B. Wood.....	Democrat...	Great Falls	2 years
	Thos. F. Richardson ..	Populist....	Great Falls	2 years
	Chas. H. Connor.....	Labor.....	Belt	2 years
	S. R. Jensen.....	Populist....	Great Falls	2 years
Choteau.....	Jno. F. Patterson	Republican..	Fort Benton	2 years
	George R. Bourne.....	Republican..	Hill	2 years
Custer	E. S. Becker.....	Republican..	Forsyth.....	2 years
	C. D. Newbury.....	Republican..	Ekalaka	2 years
Dawson	George McCone.....	Republican..	Tonka	2 years
Deer Lodge	John R. Toole.....	Ind. Dem....	Anaconda	2 years
	John M. Madden	Ind. Dem....	Anaconda	2 years
	James E. McDonnell....	Ind. Dem....	Anaconda	2 years
	Michael Geary	Ind. Dem....	Helmsville.....	2 years
	Thos. McTague	Ind. Dem....	Deer Lodge	2 years
	Jno. Bielenberg	Republican..	Deer Lodge	2 years
Fergus	Wydys Hedges.....	Republican..	Yale	2 years
	Alex B. Lehman	Republican..	Lewistown	2 years
Flathead	W. G. Fitzpatrick.....	Democrat...	Columbia Falls ..	2 years
	L. H. McIntyre.....	Republican..	Kalispell	2 years
	B. H. Faust.....	Republican..	Libby	2 years
Gallatin	James E. Martin	Democrat...	Boseman	2 years
	W. A. Roland.....	Republican..	Logan	2 years
	Wesley C. Newton.....	Republican..	Boseman	2 years
Granite	Thomas F. Ward.....	Democrat...	Garnet	2 years
	Henry Lawney	Populist....	Granite	2 years
Jefferson	John Berkin.....	Democrat...	Boulder	2 years
	Archibald R. McDonald	Democrat...	Whitehall	2 years
	Joseph B. Brien.....	Democrat...	Basin	2 years
Lewis and Clarke	John Baker	Democrat...	Helena	2 years
	Wm. J. Hartwig	Democrat...	Helena	2 years
	John H. Urquhart.....	Democrat...	Helena	2 years
	Herbert L. Cram	Democrat...	Helena	2 years
	Timothy O. Sullivan....	Democrat...	Marysville.....	2 years
	Frank H. Donaldson....	Democrat...	East Helena	2 years
	Fred S. Sanden.....	Populist....	Helena	2 years
Madison	B. J. Fine.....	Democrat...	Virginia City	2 years
	G. F. White.....	Democrat...	Virginia City	2 years
	Eli Adkins.....	Democrat...	Virginia City....	2 years
Meagher	Charles L. Murray	Republican..	White Sulphur Springs	2 years
	Nathan Godfrey	Republican..	Two Dot	2 years
Missoula.....	William Crawford	Labor.....	Clinton	2 years
	Thomas H. Pendergrass	Labor.....	Lo Lo	2 years
	Joseph M. Dixon	Republican..	Missoula	2 years
	Edward Donlan	Republican..	Frenchtown	2 years
Park	Benjamin F. Myers	Democrat...	Livingston	2 years
	Thos. M. Swindiehurst	Democrat...	Livingston	2 years
Ravalli	George T. Baggs	Republican..	Stevensville	2 years
	Aaron Connor.....	Republican..	Darby	2 years
Silver Bow	F. E. Corbett.....	Democrat...	Butte	2 years
	John MacGinnis.....	Democrat...	Butte	2 years
	Thos. S. Kilgallon.....	Democrat...	Butte	2 years
	M. P. Gilchrist.....	Democrat...	Butte	2 years
	Joseph Meunier.....	Democrat...	Butte	2 years
	Barney Ferry.....	Populist....	Butte	2 years
	Frank J. Pelletier.....	Labor.....	Butte	2 years
	F. B. Axtell.....	Labor.....	Butte	2 years
	Martin Dee, Jr.....	Labor.....	Butte	2 years
	J. J. Quinn.....	Labor.....	Butte	2 years
	Chas. Lannin.....	Labor.....	Butte	2 years
	P. J. Sullivan.....	Populist....	Butte	2 years
Sweet Grass	Robert Brownlee.....	Republican..	Melville	2 years
Teton	Wm. D. Jones	Republican..	Dupuyer	2 years
Valley	Walter Shanley	Republican..	Glasgow	2 years
Yellowstone	George C. Stull	Republican..	Billings	2 years

SEVENTH ANNUAL REPORT OF BUREAU

OFFICIAL ROSTER OF THE SENATE.

Office.	Name of Officers.	County Resident of.
President	Frank G. Higgins ..	Missoula.
President pro tempore.....	George H. Stanton ..	Cascade.
Secretary	C. A. Whipple	Broadwater.
Assistant Secretary	E. B. Largent	Cascade.
Sergeant-at-Arms	James Jobb	Meagher.
Assistant Sergeant-at-Arms	W. H. McCann	Lewis and Clarke.
Journal Clerk	D. Wortham	Silver Bow.
Engrossing Clerk.....	X. K. Stout	Flathead.
Enrolling Clerk	Alfred Hillman	Dawson.
Chaplain	Rev. I. N. Smith..	Lewis and Clarke.
Doorkeeper	N. J. Myers	Missoula.
Assistant Doorkeeper	David Johnson	Park.

OFFICIAL ROSTER OF THE HOUSE.

Office.	Name of Officer.	County Resident of.
Speaker	F. E. Corbett	Silver Bow.
Speaker pro tempore	John Baker	Lewis and Clarke.
Chief Clerk	Roger E. Skelly	Lewis and Clarke.
Assistant Chief Clerk	John S. Wyman	Missoula.
Journal Clerk	R. J. Dee	Deer Lodge.
Enrolling Clerk	Miss Nettle Kirkendall	Lewis and Clarke.
Engrossing Clerk	Joseph Gehrett	Broadwater.
Chaplain	Rev. D. B. Price	Lewis and Clarke.
Sergeant-at-Arms	Daniel McKay	Cascade.
Assistant Sergeant-at-Arms	Thomas Stanton	Silver Bow.
Doorkeeper	T. S. Woodford	Missoula.

LIST OF STATE OFFICIALS STATE OF MONTANA.

Office.	Name of Officer.	Residence.
Governor	J. K. Toole	Helena, Mont.
Lieutenant Governor	Frank G. Higgins	Missoula, Mont.
Secretary of State	George M. Hays	Billings, Mont.
State Treasurer	A. H. Barret	Butte, Mont.
Attorney General	James Donovan	Great Falls, Mont.
State Auditor	J. H. Calderhead	Helena, Mont.
Sup't. of Public Instruction	W. W. Welch	Billings, Mont.

SUPREME COURT, STATE OF MONTANA.

Office.	Name.	P. O. Address.	Elected.	Term Expires.
Chief Justice.....	Theodore H. Grantley	Helena	Nov. 8, 1898	Jan. 2, 1906
Associate Justice.....	Geo. R. Milburn	Missou City	Nov. 8, 1900	Jan. 7, 1907
Associate Justice.....	W. T. Pigott.....	Helena	Nov. 8, 1898	Jan. 2, 1906

*Elected to fill vacancy caused by death of Associate Justice Horace E. Buck.
Clerk Supreme Court, H. G. Rickerts. Marshal Supreme Court, Oliver T. Crane.

DISTRICT COURTS OF MONTANA.

No.	Office.	Name.	P. O. Address.	Counties Composing District
1	District Judge Dept. No. 1	Henry C. Smith.....	Helena ..	Lewis and Clarke
1	District Judge Dept. No. 1	J. M. Clements	Helena ..	Lewis and Clarke
2	District Judge Dept. No. 1	Edw. W. Harney	Butte	Silver Bow
2	District Judge Dept. No. 1	Wm. Clancy	Butte	Silver Bow
3	District Judge	Wellington Napton	Anaconda ..	Deer Lodge; Granite
4	District Judge	Frederick C. Webster	Missoula ..	Missoula, Ravalli
5	District Judge	M. H. Parker	Boulder ..	Beaverhead, Jefferson, Madison ..
6	District Judge	W. H. Poorman	Livingston ..	Carbon, Park, Sweet Grass
7	District Judge	C. H. Loud	Miles City ..	Custer, Dawson, Yellowstone, R'bud ..
8	District Judge	J. B. Leslie	Great Falls ..	Cascade
9	District Judge	Wm. L. Holloway	Boseman ..	Gallatin, Meagher, Broadwater ..
10	District Judge	Edwin R. Cheadle	Lewistown ..	Fergus
11	District Judge	D. F. Smith	Kalispell ..	Flathead, Teton
12	District Judge	J. W. Tattan	Fort Benton ..	Choteau, Valley

OFFICERS APPOINTED BY THE GOVERNOR.

Office.	Name.	P. O. Address	Politics.	Appointed.	Term Expires.
Private Sec'y to Governor ...	Randolph Thompson	Helena.....	Democrat..	Jan. 7, 1901	Jan. 7, 1905
State Land Agent	Henry Neill	Helena.....	Populist ..	.....	.....
Register State Land Office ..	Harry D. Moore	Helena.....	Populist ..	Mar. 2, 1897	Mar. 2, 1901
State Examiner	John G. Moroney	Helena.....	Democrat ..	Feb. 22, 1897	Feb. 22, 1901
State Veterinary Surgeon	Morton E. Knowles	Helena.....	Democrat ..	Feb. 12, 1897	Mar. 7, 1901
Inspector of Mines	John Byrne	Helena.....	Populist ..	Feb. 2, 1901	Feb. 2, 1905
Deputy Inspector of Mines ..	John T. Barry	Helena.....	Democrat ..	Feb. 12, 1901	Feb. 12, 1905
State Boiler Inspector	Frank A. Burns	Helena.....	Populist ..	Feb. 12, 1897	Mar. 1, 1901
Asst. Boiler Inspector	James H. Dally	Helena.....	Populist ..	Feb. 12, 1897	Mar. 1, 1901
Com. Agr. Labor and Ind	J. A. Ferguson	Helena.....	Labor ..	Feb. 1, 1901	Mar. 1, 1905
State Law Librarian	Miss Lou Guthrie	Helena.....	.....	.....	Mar. 2, 1901
Librarian Historical Society..	Mrs. R. H. Howey	Helena.....	.....	.....	.....
Custodian Ft. Ellis Reserva- tion	Andrew C. Harding	Boseman.....	.....	Jan. 20, 1897	.....
Custodian Ft. Maginnis Res- ervation	Otto Anderson	Ft. Maginnis..	Democrat ..	Feb. 6, 1897	A.....

STATE BOARD OF EXAMINERS.

Members.	Title.	Organization.
Joseph K. Toole	Governor	President.
Geo. M. Hays	Secretary of State	Secretary.
James Donovan	Attorney General	Member.

Clerk of the Board, Lou R. Hess.....

STATE FURNISHING BOARD.

Members.	Title.	Organization.
Joseph K. Toole	Governor	President.
Geo. M. Hays	Secretary of State	Secretary.
James Donovan	Attorney General	Member.

STATE BOARD OF EQUALIZATION.

Members.	Title.	Organization.
Joseph K. Toole	Governor	President.
Geo. M. Hays	Secretary of State	Secretary.
James Donovan	Attorney General	Member.
A. H. Barret	Treasurer	Member.
J. H. Calderhead	Auditor	Member.

Clerk of the Board, J. J. Ryan.

SEVENTH ANNUAL REPORT OF BUREAU

STATE BOARD OF LAND COMMISSIONERS.

Members.	Title.	Organization.
Joseph K. Toole	Governor	President.
W. W. Welch	Sup't. Public Instruction	Secretary.
Geo. M. Hays	Secretary of State	Member.
James Donovan	Attorney General	Member.

ARID LAND GRANT COMMISSION.

Members.	Organization.	P. O. Address.	Appointed.	Term Expires.
Thos. C. Marshall	Chairman	Missoula ...	Apr. 3, 1897	Apr. 3, 1901
Donald Bradford	Vice-Chairman	Helena ...	Apr. 3, 1897	Apr. 3, 1901
C. O. Reed	Secretary	Helena ...	Apr. 3, 1897	Apr. 3, 1903
D. A. Cory	Member	Helena ...	Apr. 3, 1897	Apr. 3, 1899
Jos. T. Brown	Member	Miles City ...	Jan. 8, 1900	Apr. 3, 1905

STATE BOARD OF PRISON COMMISSIONERS.

Members.	Title.	Organization.
Joseph K. Toole	Governor	President.
Geo. M. Hays	Secretary of State	Secretary.
James Donovan	Attorney General	Member.

* Clerk of the Board, C. S. Ashby.

STATE BOARD OF PARDONS.

Members.	Title.	Organization.
James Donovan	Attorney General	President.
Geo. M. Hays	Secretary of State	Secretary.
J. H. Calderhead	Auditor	Member.

Clerk of the Board, Miss Anita D. Rosecrans.

STATE BOARD OF COMMISSIONERS FOR INSANE.

Members.	Title.	Organization.
Joseph K. Toole	Governor	President.
Geo. M. Hays	Secretary of State	Secretary.
James Donovan	Attorney General	Member.

STATE BOARD OF CHARITIES AND REFORM.

Members.	Organization.	P. O. Address.	Appointed.	Term Expires.
Rev. E. J. Groeneveld	President	Butte ...	Dec. 14, 1896	Mar. 27, 1900
Rev. Walter M. Jordan	Secretary	Helena ...	Mar. 3, 1900	Mar. 27, 1901
Rev. W. W. VanOrsdel	Member	Helena ...	Mar. 3, 1897	Mar. 27, 1903

HOME FOR ORPHANS, FOUNDLINGS AND DESTITUTE CHILDREN, TWIN BRIDGES.

BOARD OF TRUSTEES AND MANAGEMENT.

Members.	Organisation.	P. O. Address.	Appointed.	Term Expires.
Patrick Carney	President	Parrot	Feb. 24, 1897	Mar. 27, 1901
Jno. R. Comfort	Secretary	Twin Bridges	Mar. 28, 1896	Mar. 27, 1899
Amos Eastman	Treasurer	Twin Bridges	May 21, 1900	Mar. 27, 1903
Jno. M. Brooks	Member	Twin Bridges	Feb. 24, 1897	Mar. 27, 1901
Wasson M. Oliver	Member	Dillon	Feb. 24, 1897	Mar. 27, 1901

MANAGEMENT.

Wiley Mountjoy, Superintendent Twin Bridges.

STATE CAPITOL COMMISSION.

Members.	Organisation.	P. O. Address.	Appointed.	Term Expires.
Joseph K. Toole	Chairman, ex-officio	Helena .....	.....	.....
J. M. Fox		Red Lodge	Mar. 13, 1897	.....
A. D. Peck		Deer Lodge	Mar. 13, 1897	.....
Ellisur Beach		Augusta	Mar. 13, 1897	.....
Thomas Greenough		Missoula	Feb. 13, 1901	.....

STATE LAW LIBRARYBOARD OF TRUSTEES.

Members.	Organisation.	P. O. Address.	Appointed.	Term.	Expires.
Theo. Buntley	President	Helena	Ex-officio	Six years	Jan. 1, 1895
Geo. R. Milburn	Member	Helena	Ex-officio	Six years	Jan. 7, 1897
Wm. T. Pigott	Member	Helena	Ex-officio	Six years	Jan. 2, 1899
J. H. Calderhead	Member	Helena	Ex-officio	Four years	Jan. 7, 1895
Geo. M. Hays	Secretary	Helena	Ex-officio	Four years	Jan. 7, 1895

STATE HISTORICAL SOCIETY—BOARD OF TRUSTEES.

Members.	Organisation.	P. O. Address.	Appointed.	Term.	Term Expires.
W. B. Hundley	President	Helena	Mar. 2, 1897	Two years	Mar. 1, 1899
T. C. Bach	Secretary	Helena	Mar. 2, 1897	Two years	Mar. 1, 1899
A. J. Craven	Member	Helena	Mar. 2, 1897	Two years	Mar. 1, 1899
C. O. Reed	Member	Helena	Mar. 2, 1897	Two years	Mar. 1, 1899
James W. Forbis	Member	Butte	Feb. 13, 1897	Two years	Mar. 1, 1899

Librarian—MRS. R. H. HOWIE.

STATE BOARD OF EDUCATION.

Members.	Organisation.	P. O. Address.	Appointed.	Term Expires.
Joseph K. Toole	Chairman	Helena	Ex-officio .....	.....
W. W. Welsh	Secretary	Helena	Ex-officio .....	.....
Jos. Donavan	Member	Helena	Ex-officio .....	.....
O. F. Goldard	Member	Billings	Feb. 18, 1896	Feb. 1, 1899
John T. Hendricks	Member	Butte	Feb. 17, 1900	Feb. 17, 1903
J. M. Hamilton	Member	Missoula	Mar. 1, 1898	Feb. 1, 1899
J. G. McKey	Member	Butte	Jan. 29, 1897	Feb. 1, 1899
O. P. Chisholm	Member	Bozeman	Jan. 28, 1897	Feb. 1, 1899
H. R. Melton	Member	Dillon	Jan. 28, 1897	Feb. 1, 1901
M. J. Garret	Member	Helena	Jan. 28, 1897	Feb. 1, 1901
N. W. McConnell	Member	Helena	Jan. 1, 1896	Feb. 1, 1898

STATE BOARD OF SCHOOLTEXT-BOOK COMMISSIONERS.
(Created by act proved Mar. 1, 1897.)

Members.	Organisation.	P. O. Address.	Appointed.	Term Expires.
Supt. of Pub. Instruct'n, W. W. Welsh	Chairman	Helena	Ex-officio.....	.....
E. O. Rusenburg	Secretary	Glendive	Mar. 25, 1897	Not specified
Att'y General, James Donovan	Member	Helena	Ex-officio.....	.....
Pres. Mont. University, O. J. Craig ..	Member	Missoula	Ex-officio.....	.....
Pres. Agri. College, James Reid	Member	Bozeman	Ex-officio.....	.....
J. G. McKay	Member	Butte	Mar. 25, 1897	Not specified
M. S. Stapleton	Member	Anaconda	Mar. 25, 1897	Not specified

UNIVERSITY OF MONTANA—EXECUTIVE COMMITTEE.

Members.	Organisation.	P. O. Address.	Appointed.	Term Exp.
J. H. T. Ryman	President ..	Missoula	Dec. ..., 1896	Feb. ..., 1902
T. C. Marshall	Secretary ..	Missoula	Dec. ..., 1896	Feb. 1, 1901
Hiram Knowles	Member	Missoula	Dec. ..., 1894	Feb. 1, 1900

UNIVERSITY OF MONTANA, MISSOULA, FACULTY.

Oscar J. Craig, A. M. Ph. D.....	Professor of History.
Miss Cynthia E. Riley, B. S.....	Professor of Mathematics.
W. M. Aber, A. B.....	Professor of Latin and Greek.
Fred C. Scheuch, M. E. A. C.....	Professor of Modern Languages and Mechanical Engineering.
Morton J. Elrod, M. A.....	Professor of Biology.
Mrs. Walter Whittaker.....	Instructor in Music.
Eloise Knowles	Assistant in the Preparatory Dep't.
William D. Hawkins, A. B.	Instructor in Chemistry.
Louise Hathaway	Assistant in Mathematics.
Frances Corbin	Professor of English and Literature.
J. P. Rowe, B. S.	Instructor in Physics and Geology.
Grace Herndon	Instructor in Vocal Music.
Mary A. Craig	Librarian.

STATE NORMAL SCHOOL, DILLON, MONTANA.
Control and General Supervision vested in State Board of Education.
LOCAL EXECUTIVE BOARD.

Members.	Organisation.	P. O. Address.	Appointed.	Term Expires.
Leonard Eliel	President	Dillon	Mar. 20, 1897	Mar. 31, 1900
A. L. Stone	Sec'y and Treas	Dillon	Mar. 23, 1897	Mar. 31, 1900
B. F. White.....	Member	Dillon	Mar. 23, 1897	Mar. 31, 1900
F. C. Kress	Member	Dillon	Apr. 12, 1897	Mar. 31, 1900
Edwin Norris	Member	Dillon	Mar. 23, 1897	Mar. 31, 1900

STATE NORMAL SCHOOL FACULTY:

Dr. G. J. McAndrew, President	Psychology and Pedagogy
Dr. H. H. Swain	Economics and History
J. E. Monroe, A. B.....	Natural Science
Laura L. Miller, B. L.....	English and Latin
Chas. J. Fenner, M. S.....	Mathematics
Annie L. Harwood, B. L.....	Training
Bertha Huntzman	Physical Culture and Ass't in English
E. J. Panamora	Director of Music

MONTANA COLLEGE OF AGRICULTURE AND MECHANIC ARTS AND THE
EXPERIMENT STATION.

Located at Bozeman by act approved February 18, 1893. General control vested in
the State Board of Education

EXECUTIVE BOARD.

Members.	Organization.	P. O. Address.	Appointed.	Term Exp.
Lester S. Wilson	President	Bozeman	Feb. 15, 1897	Feb. 1, 1901
Peter Koch	Sec'y and Treas	Bozeman	Mar. 21, 1893	Feb. 1, 1903
Walter S. Hartman	Member	Bozeman .....	.....	Feb. 1, 1903
John M. Robinson	Member	Bozeman .....	.....	Feb. 1, 1903
Joseph Kountz	Member	Manhattan .....	.....	Feb. 1, 1904

FACULTY OF AGRICULTURAL COLLEGE.

JAMES REID, A. B. (McGill University) President.
Professor of Mental, Moral and Political Science and Astronomy.

FRANK W. TRAPHAGEN, Ph. D. (Columbia), F. C. S.
Professor of Physics, Chemistry and Geology.

MRS. F. E. MARSHALL.
Professor of Art.

W. H. WILLIAMS, B. E. E. (Univ. of Wisconsin),
Professor of Mechanical and Electrical Engineering.

W. F. BREWER, M. A. (Harvard),
Professor of Latin and English.

AARON H. CURRIER, A. M. (Oberlin),
Professor of French and German.

.....
Professor of Military Science and Tactics.

MISS LILA A. HARKINS, M. S. (S. Dak. Agr. Col.),
Professor of Domestic Science.

ROBERT S. SHAW, B. S. A. (Ontario Agr. Col.),
Professor of Agriculture.

J. W. BLANKINSHIP, Ph. D. (Harvard),
Professor of Botany.

SAMUEL FORTIER, Ma. E. (McGill Univ.),
Professor of Civil Engineering.

R. A. COOLEY, B. S. (Mass. Agr. Col.),
Professor of Zoology and Entomology.

H. G. PHELPS,
Principal of Business Department.

MISS M. A. CANTWELL,
Principal of Preparatory Department.

W. M. COBLEIGH, E. M. (Col. of Montana) A. M., (Columbia Univ.),
Instructor in Physics and Chemistry.

W. D. THALLMAN (Univ. of Wisconsin),
Instructor in Mathematics.

E. B. McCORMICK, S. B. (Mass. Inst. of Tech.),
Instructor in Mechanical Engineering.

MISS HELEN R. BREWER, A. B. (Iowa Col.),
Instructor in Latin and History.

MRS. M. K. HALL, B. Ph. (Oberlin College),
Instructor in Preparatory Department.

MR. J. H. GILL, M. E. (Univ. of Minn.),
Instructor in Mechanical Practice.

E. C. WOODRUFF, Ph. D. (Univ. of Mich.),
Assistant in Chemistry.

MR. ED. BURK, Assistant in Experiment Station Laboratory.

SEVENTH ANNUAL REPORT OF BUREAU

MISS EMMA STOCKINGER,
Instructor in Stenography and Typewriting.

MISS KATE P. CALVIN,
Piano.

MRS. MARY WINTER,
Librarian.

EXPERIMENT STATION STAFF.

SAMUEL FORTIER, M. E.,
Director and Irrigation Engineer.

F. W. TRAPHAGEN,
Chemist.

J. W. BLANKINSHIP,
Botanist.

R. S. SHAW,
Agriculturist.

SAMUEL FORTIER,
Irrigation Engineer.

ROBERT A. COLEY,
Zoologist and Entomologist.

HENRY C. GARDINER,
Assistant in Experiment Station.

MONTANA STATE SCHOOL OF MINES, BUTTE.
COMMISSION AND BOARD OF TRUSTEES.

Members.	Organization.	P. O. Address.	Appointed.	Term Expires.
J. E. Rickards	President..	Butte	Dec. 5, 1899	Jan. 1, 1904
Geo. E. Monthrop	Member	Butte	Dec. 5, 1899	Jan. 1, 1902
Wm. Y. Pemberton	Member	Butte	Dec. 5, 1899	Jan. 1, 1902

FACULTY.

Nathan R. Leonard, A. M. Acting President and Professor of Mathematics
William G. King, A. M. Professor of Chemistry and Metallurgy
Alexander N. Winchell, Ph. D. Professor of Geology, Mining and Mineralogy
Chas. H. Bowman, M. S. Professor of Mechanics and Mining Engineering
Harold S. Boardman, C. E. Instructor in Draughting and Mining Engineering

STATE REFORM SCHOOL, MILES CITY, MONT.

BOARD OF TRUSTEES AND MANAGEMENT.

Members.	Title.	Address.	Term Expires.
J. W. Strevell	President ..	Miles City	March 29, 1902.
Jno. E. Truscott	Member ...	Miles City	March 27, 1901.
J. B. Hawkins	Member ...	Miles City	April 1, 1903.

MANAGEMENT AND INSTRUCTORS.

C. B. Dickinson

Mrs. C. B. Dickinson

J. B. Hawkins

A. D. Perkins

J. A. Andrews

Elizabeth Mills

W. E. Alnsworth

Joseph Jenison

George N. Cheever

Mrs. Martha Cheever

D. S. Johnson

Lena Olsen

Chas. E. Hamilton

Mrs. D. L. Shy

Director.

Matron.

Overseer.

Sup't Boys' Building and Musical In-

structor.

Teacher.

Teacher.

Officer Company "A."

Officer Company "B."

Engineer.

Seamstress.

Night Watchman.

Laundress.

Cook Boys' Building.

Cook Girls' Building.

STATE DEAF AND DUMB ASYLUM.
Control and Supervision Vested in the State Board of Education.
BOARD OF TRUSTEES AND MANAGEMENT.

Name.	Organization.	P. O. Address.	Term Expires.
Jno. F. Sheehy	President	Boulder	March 31, 1903.
Charles Scharf	Secretary	Boulder	March 31, 1903.
Wm. V. Meyers	Member	Boulder	May 31, 1904.

MANAGEMENT.

Thos. S. McAlooney	Superintendent	Boulder.
E. A. Irwin, M. D.	Physician	Boulder.
Miss Carrie R. Stinson	Matron	Boulder.
Mrs. Rena Phillips	Gen'l. Supervisor, Etc.	Boulder.
Ira D. Shope	Engineer and Farmer	Boulder.

INSTRUCTORS.

Louis A. Divine	Teacher of the Deaf.
Allen T. Schoolfield	Teacher of the Deaf.
Miss Ellerbe Holt	Teacher of the Blind.
Max W. Voss	Music Teacher of the Blind.

INDUSTRIAL DEPARTMENT.

Louis A. Divine	Teacher of Carpentry.
Mrs. Rena Phillips	Teacher of Dressmaking and Sewing.
Mrs. Emma Farrar	Teacher of Cooking.
Mrs. Massa	Teacher of Laundrying.

STATE BOARD OF PHARMACY.

Members.	Organization.	P. O. Address.	Appointed.	Term Expires.
C. B. Haskins	President	Butte	Dec. 22, 1900	Mar. 25, 1903
J. B. Lockwood	Secretary	Helena	Mar. 22, 1902	Mar. 25, 1903
Ed J. Coffee	Treasurer	Missoula	June 2, 1902	Mar. 25, 1903

BOARD OF MEDICAL EXAMINERS OF MONTANA.

Members.	Organization.	P. O. Address.	Appointed.	Term.	Term Expires.
Jno. A. Sweat	President	Great Falls	Nov. 18, 1899	Seven years	Dec. 31, 1901
H. Chapple	Secretary	Billings	Feb. 25, 1900	Seven years	Dec. 31, 1902
W. C. Riddell	Member	Helena	Mar. 17, 1902	Seven years	Dec. 31, 1903
W. H. Campbell	Treasurer	Livingston	Jan. 1, 1900	Seven years	Dec. 31, 1904
T. J. Murray	Member	Butte	Dec. 28, 1900	Seven years	Dec. 31, 1906
Geo. H. Barbour	Member	Helena	Dec. 31, 1900	Seven years	Dec. 31, 1905
O. C. Evans	Member	Missoula	Jan. 13, 1907	Seven years	Dec. 31, 1903

STATE BOARD OF DENTAL EXAMINERS.

Members.	Organization.	P. O. Address.	Appointed.	Term Expires.
W. A. Tudor	President	Bozeman	Mar. 23, 1905	Mar. 25, 1906
H. J. Worth	Treasurer	Helena	Mar. 23, 1906	Mar. 25, 1908
W. J. Hall	Member	Butte	Mar. 23, 1906	Mar. 25, 1909

SEVENTH ANNUAL REPORT OF BUREAU

NATIONAL GUARD OF MONTANA.

Joseph K. Toole, Commander-in-Chief.

GENERAL STAFF.

Rank and Name.	Office.	Station.
Brigadier General, Chas. F. English.....	Adjutant General	Helena.
Colonel, James T. Stanford	Inspector General	Great Falls
Lieut.-Colonel, J. D. Eaton.....	Ass't. Inspector General	Kalispell.
Colonel, R. D. Leggat	Quartermaster General	Butte.
Colonel, A. J. Campbell	Commissary General	Butte.
Colonel, W. C. Riddell	Surgeon General	Helena.
Major, H. J. Miller	Judge Advocate	Butte.
Lieut.-Colonel, Jno. F. Firch	Aide-de-Camp	Butte.
Lieut.-Colonel Thos. McTague	Aide-de-Camp	Deer Lodge
Lieut.-Colonel, C. M. Crutchfield.....	Aide-de-Camp	Hamilton.

MEDICAL DEPARTMENT.

Rank.	Name.	Residence.
Surgeon (Major)	W. C. Riddell	Helena.
Assistant Surgeon (Captain)	H. W. Foster	Bozeman.

SOLDIERS' HOME, COLUMBIA FALLS.
BOARD OF MANAGERS.

Members.	Organization.	P. O. Address.	Appointed.	Term Expires.
John L. Sloan	President	Missoula	Apr. 18, 1900	Apr. 18, 1906
C. B. Miller	Secretary	Helena	Apr. 18, 1896	Apr. 18, 1899
J. D. Eaton	Member	Kalispell	Aug. 3, 1896	Mar. 1, 1891
H. S. Howell	Member	Helena	Feb. 9, 1897	Mar. 1, 1891
N. H. Manchester	Member	Butte		Mar. 3, 1901

Capt. Jno. R. Hilman, Commandant of Home.

UNITED STATES PENSION BOARD.

Meets 1st and 3d Wednesdays each month.

Members.	Organization.	P. O. Address.
Dr. W. L. Steele	President	Helena.
Dr. C. B. Miller	Secretary	Helena.
Dr. J. Alex. Moore	Treasurer	Helena.

STATE GAME AND FISH COMMISSION.

Members.	Organization.	P. O. Address.	Appointed.	Term Expires.
M. J. Elrod	Chairman	Missoula	Mar. 6, 1898	Feb. 9, 1902
R. A. Wagner	Member	Bozeman	Mar. 8, 1899	Feb. 9, 1902

STATE INSANE ASYLUM.

Title.	Location.	Located by	Contractors.
State Insane Asylum ..	Warm Springs	Not located	Mitchell & Muselbrod .

STATE PRISON.

Title.	Location.	Located by	Contractors.
Western State Prison	Deer Lodge	Act approved Mar. 3, 189	Conley & McTague...

STATE BOARD OF SHEEP COMMISSIONERS.

1900.

County.	Commissioner.	Address.
Beaverhead	James P. Murray	Dillon.
Broadwater	R. H. Clendenin	Glenwood.
Carbon	David Smethurst	Red Lodge.
Cascade	H. H. Nelson	Cascade.
Choteau	George B. Bourne	Hill.
Custer	Frank D. O'Neill	Miles City.
Dawson	William Lindsay	Glendive.
Deer Lodge	William Williams	Deer Lodge.
Fergus	David Hilger	Lewistown.
Flathead		
Gallatin	John F. Work	Boseman.
Granite		
Jefferson		
Lewis and Clarke	T. C. Power	Helena.
Madison	S. R. Buford	Virginia City.
Meagher	D. E. Folsom	White Sulphur Springs.
Missoula	D. R. MacLay	Lo Lo.
Park	S. O'N. C. Brady	Myersburg.
Ravalli	J. L. Humble	Corvallis.
Silver Bow	T. Clowes Miles	Silver Bow.
Sweet Grass	W. P. Franklin	Melville.
Teton	George I. Smith	Choteau.
Valley	L. H. Mills	Saco.
Yellowstone	B. P. Moss	Billings.

DEPUTY SHEEP INSPECTORS.

County.	Inspector.	Address.
Beaverhead	L. E. Thomas	Dillon.
Broadwater	C. W. Cook	Unity.
Carbon	Frank L. Clark	Red Lodge.
Cascade	Warren McNinch	Great Falls.
Choteau	John F. Patterson	Fort Benton.
Custer	Dan. H. Bowman	Knowlton.
Dawson	Joel Gleason	Glendive.
Deer Lodge	John A. Robinson	Deer Lodge.
Fergus	David Hilger	Lewistown.
Gallatin	John F. Work	Boseman.
Madison	L. S. Briggs	Ennis.
Meagher	C. W. Cook	Unity.
Missoula	Dr. G. T. McCullough	Missoula.
Park	J. W. Van Doren	Livingston.
Ravalli	Thomas A. Chaffin	Corvallis.
Silver Bow	Dr. J. D. McGregor	Butte.
Sweet Grass	Albert Harrison	Big Timber.
Teton	E. Rose	Cut Bank.
Valley	J. H. Jordan	Saco.
Yellowstone	A. C. Logan	Billings.

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ASSISTANT DEPUTY SHEEP INSPECTORS.

Carbon	W. R. Bainbridge	Bean.
Choteau	Frank Hansen	Chinook.
Choteau	J. F. Freeman	Chinook.

STATE BOARD OF STOCK COMMISSIONERS.

Counties.	Name.	Residence.
Beaverhead	M. Barrett	Dillon.
Broadwater	F. J. Keene	Canton.
Carbon	J. N. Tolman	Red Lodge.
Cascade	Jacob Seiben	Cascade.
Choteau	C. J. McNamara	Big Sandy.
Custer	O. C. Cato	Miles City.
Dawson	Chas. Krug	Glendive.
Deer Lodge.	Jno. Bielenberg	Deer Lodge.
Fergus	S. S. Hobson	Utica.
Flathead	J. A. Ford	Kalspell.
Gallatin	V. A. Cockrill	Central Park.
Granite	A. A. McDonald	Phillipsburg.
Jefferson	Jno. Flaherty	Boulder.
Lewis and Clarke ..	J. T. Murphy	Helena.
Madison	W. J. Ennis	Puller Springs.
Meagher	Len Lewis	Lewis.
Missoula	J. A. McGowan	Plains.
Park	G. W. Wakefield	Livingston.
Ravalli	G. W. Ward	Hamilton.
Silver Bow	Levi Carter	Butte.
Sweet Grass	J. W. Kelly	Springdale.
Teton	W. K. Floweres	Sun River.
Valley	M. E. Milner	Malta.
Yellowstone	David Fratt	Billings.

J. T. Murphy, President.

C. C. Smith, Clerk.

W. G. Preullt, Secretary.

STOCK INSPECTORS.

R. P. Heren	Chicago, Ill.
C. L. Heren	Chicago, Ill.
E. K. Preullt	Helena, Mont.
E. D. Bowmer	Lewistown, Mont.
W. W. Gagn	Ennis, Mont.
Frank Carter	Butte, Mont.
W. D. Smith	Miles City, Mont.
Harry Lund	Fort Benton, Mont.
H. E. Bourdette	St. Paul, Minn.
R. H. Rickard	South Omaha, Neb.
J. W. Collins	Billings, Mont.
N. M. Standaher	Dillon, Mont.

DEPUTY VETERINARIANS IN THE STATE OF MONTANA.

County.	Name.	Address.
Cascade .....	.....	.....
Choteau	Harry Lund	Ft. Benton.
Choteau .....	.....	.....
Choteau	K. Preultt	Chinook.
Custer	W. D. Smith	Miles City.
Custer	T. W. Longley	Forsyth.
Dawson	Joel Gleason	Glendive.
Dawson .....	.....	Buford, N. D.
Deer Lodge	Dr. J. F. Spellman	Anaconda.
Deer Lodge	J. M. Boardman	Deer Lodge.
Flathead	Thos. Quirk	Tobacco Plains.
Flathead	Dr. C. E. Depew	Kalispell.
Missoula	C. C. Willis	Helena.
Lewis and Clarke	Dr. S. W. McClure	Plains.
Silver Bow	Dr. J. D. McGregor	Butte.
Sweet Grass	Dr. W. A. Moore	Big Timber.
Sweet Grass	J. F. Bryson	Merrill.
Teton	Dr. Thos. Brooks	Choteau.
Valley	John Survant	Malta.
Yellowstone .....	.....	.....
Yellowstone	J. W. Collins	Billings.

DIRECTORY OF UNITED STATES OFFICERS IN MONTANA.

Office.	Name.	Residence.
Judge of U. S. District Court	Hiram Knowles	Missoula.
U. S. District Attorney	W. B. Rodgers	Anaconda.
Asst. U. S. District Attorney	J. C. English	Anaconda.
Clerk of U. S. District Court	George W. Sproule	Helena.
United States Marshal	J. P. Woolman	Helena.
Surveyor General	E. W. Beattie	Helena.
Collector of Internal Revenue	C. M. Webster	Great Falls.
Collector of U. S. Customs	David G. Browne	Great Falls.
Assayer U. S. Assay Office	B. H. Tatem	Helena.
Melter U. S. Assay Office	L. A. Walker	Helena.
Register Helena Land Office	G. D. Greene	Helena.
Receiver Helena Land Office	John Horasky	Helena.
Register Bozeman Land Office	A. L. Love	Bozeman.
Receiver Bozeman Land Office	John F. Asbury	Bozeman.
Register Miles City Land Office	Sam Gordon	Miles City.
Register Missoula Land Office	E. E. Hershey	Missoula.
Receiver Missoula Land Office	W. Q. Ranft	Missoula.
Register Lewistown Land Office	David Hilger	Lewistown.
Receiver Lewistown Land Office	John P. Barnes	Lewistown.
Register Kalispell Land Office	Frank H. Nash	Kalispell.
Receiver Kalispell Land Office	W. C. Whipple	Kalispell.

NOTE.

Receiver Bozeman Land Office.....A. J. Edsall
 Receiver Miles City Land Office.....James M. Rhoades
 Receiver Lewistown Land Office.....Edward Brassery
 Register Lewistown Land Office.....Louis W. Eldridge

COMMISSIONERS OF DEEDS FOR THE STATE OF MONTANA, DEC. 31, 1900.
CALIFORNIA.

Date Issued and Name.	Address.	Expires.
Sept. 4, 1896—King, Jas. L.....	308 California St., San Francisco.....	Sept. 4, 1901.
March 5, 1897—Knox, Geo. T.....	144 California St., San Francisco.....	March 5, 1902.

CONNECTICUT.

Feb. 4, 1896—Cleveland, L. W.....	69 Church St., New Haven.....	Feb. 4, 1901.
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DISTRICT OF COLUMBIA.

May 13, 1896—Mitchell, John E.....	1321 F. St. N. W., Washington, D. C.....	May 13, 1901.
July 23, 1896—Bundy, Charles S.....	317-319 4½ st. N. W., Washington, D. C.	July 23, 1901.

ILLINOIS.

June 13, 1896—Humphrey, Wirt E..	551 Monadnock Building, Chicago, Ill...	June 13, 1900.
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LOUISIANA.

March 2, 1897—Soniat, Maloney C..	Corner of Carondelet and Common Sts., New Orleans	March 2, 1902.
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MASSACHUSETTS.

Dec. 2, 1896—Adams, Chas. Hall	23 Court St., Boston	Dec. 2, 1901.
Jan. 2, 1896—Jennisson, Samuel....	Boston	Jan. 2, 1901.
Jan. 15, 1896—Jones, Edward J.....	61 Court St., Boston	Jan. 15, 1901.
Jan. 15, 1896—Forrey, Arthur H.....	23 Court St., Boston	June 15, 1901.
April 5, 1897—Bissell, Clarence H....	Winthrop, Sears Building	April 5, 1902.

MINNESOTA.

Nov. 11, 1896—Sweetser, A. F.....	Minneapolis	Nov. 11, 1900.
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MISSOURI.

May 13, 1896—Greene, Charles D....	421 Olive St., St. Louis	May 13, 1901.
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NEW YORK.

Jan. 2, 1896—Mackay, Alfred	59 Cedar St., New York	Jan. 2, 1901.
Feb. 8, 1896—Corey, Geo. H.....	New York	Feb. 8, 1901.
April 18, 1896—Kiddler, Leonard R..	45 Wall St., New York.....	April 18, 1901.
April 23, 1896—Mills, Charles Edgar	115 Broadway, New York	April 23, 1901.
July 25, 1896—Hillery John A.....	56 Wall St., New York	July 25, 1901.
Sept. 25, 1896—Braman, Joseph B....	120 Broadway, New York	Sept. 25, 1901.
Jan. 5, 1897—Clarkson, William H.	115 Broadway, New York	Jan. 5, 1902.

PENNSYLVANIA.

June 23, 1896—Fell, William Jenks..	131 S. 5th St., Philadelphia.....	June 23, 1898.
Sept. 5, 1896—Taylor, Samuel L....	Betz Building, Philadelphia.....	Sept. 9, 1900.
Oct. 3, 1896—Hunt, Geo. W.....	623 Walnut St., Philadelphia	Oct. 3, 1901.

GREAT BRITAIN.

Feb. 8, 1897—Hendry J. Burke	London	Feb. 8, 1902.
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LIST OF UNITED STATES COMMISSIONERS, DISTRICT OF MONTANA, DEC. 31, 1906.

Name.	Residence.	When Appointed.
Badger, B. W.	White Sulphur Springs	June 30, 1897.
Blair, J. G.	Choteau	June 30, 1897.
Boyle, D. P.	Libby	June 30, 1897.
Brown, F. D.	Phillipsburg	June 30, 1897.
Burlingame, J. M.	Great Falls	Sept. 8, 1897.
Cockrill, W. M.	Great Falls	June 30, 1897.
Comfort, J. R.	Twin Bridges	June 30, 1897.
Cameron, E. F.	Vermillion	June 30, 1897.
Catlin, J. B.	Hamilton	June 30, 1897.
Everett, T. M.	Harlem	June 30, 1897.
Eardley, J. R.	Anaconda	July 1, 1897.
Fraser, A.	Billings	June 30, 1897.
Garrett, E. C.	Choteau	Sept. 16, 1897.
Gray, F. L.	Kalispell	Nov. 23, 1897.
Boyle, C. H.	Fort Benton	Dec. 19, 1898.
Lohmiller, C. B.	Poplar	Nov. 17, 1898.
Jakways, C. A.	Ovando	June 30, 1897.
Jewett, H. C.	Absarokee	June 30, 1897.
Kreidler, F. M.	Miles City	June 30, 1897.
Langhear, O. M.	Big Timber	June 30, 1897.
Lindsey, A. Y.	Tobacco Plains	June 30, 1897.
Logan, Sidney M.	Kalispell	Nov. 23, 1897.
Mell, H. J.	Havre	June 30, 1897.
Meyer, W. F.	Red Lodge	June 30, 1897.
Morris, F. J.	Grantsdale	June 30, 1897.
Covington, C. C.	Augusta	June 30, 1897.
Moore, W. E.	Phillipsburg	May 14, 1898.
McPherson, A. D.	Bozeman	Sept. 8, 1897.
Naughton, W. J.	Butte	June 30, 1897.
Price, L. J.	Dillon	Sept. 16, 1897.
Price, M. C.	Whitlash	June 30, 1897.
Pierson, G. W.	Red Lodge	June 30, 1897.
Posten, J. D.	Libby	June 30, 1897.
Russel, E. C.	Helena	June 30, 1897.
Rainbolt, W. S.	Chinook	June 30, 1897.
Ray, J. H.	Glendive	June 30, 1897.
McIntyre, S. J.	Havre	June 30, 1897.
Skillman, C. N.	Big Timber	June 23, 1898.
Scott, F. H.	Lloyd	June 30, 1897.
Sands, W. B.	Chinook	June 30, 1897.
Sullivan, Jere	Fort Benton	June 30, 1897.
Smith, W. P.	Missoula	June 30, 1897.
Smith, W. G.	Darby	June 30, 1897.
Solleder, G. W.	Darby	June 30, 1897.
Newhall, E. B.	Big Sandy	June 30, 1897.
Warner, A. C.	Choteau	Aug. 1, 1898.
Weldy, B. B.	Chester	June 30, 1897.
Whitney, L. C.	Carbonado	June 30, 1897.
James, J. W.	Anaconda	May 4, 1898.
Cowan, W. T.	Box Elder	Dec. 1, 1897.
Arnour, J. N.	Browning	April 15, 1898.
Word, C. L.	Butte	Dec. 17, 1897.
Melum, B. M.	Capitol	Dec. 1, 1897.
Lewis, J. E.	Columbia Falls	June 30, 1897.
Miller, F. E.	Crow Agency	April 8, 1898.
Brown, Alex	Deer Lodge	April 8, 1898.
Magee, Geo. W.	Dupuyer	April 8, 1898.
Woodward, F. C.	Gebo	Jan. 28, 1898.
Kerr, J. J.	Glasgow	April 28, 1898.
McDowell, John	Gold Butte	April 15, 1898.

LIST OF U. S. COMMISSIONERS.—(Continued.)

Name.	Residence.	When Appointed.
Sterling, F. P.	Helena	March 5, 1900.
Woolridge, W. M.	Hinsdale	April 18, 1899.
Gill, A. D.	Sandusky	March 5, 1900.
Wilson, James	Malta	Jan. 10, 1899.
Rhone, J. A.	Plains	Jan. 10, 1899.
Darling, M. S.	Pondera	May 8, 1899.
Noyes, A. W.	Pony	May 8, 1899.
Rood, C. L.	Ridgelaun	June, 1900.
Wilcox, J. M.	Shelby	Jan. 28, 1898.
Stone, R. W.	Bridger	Nov. 5, 1900.
Adams, W. C.	Thompson Falls	March 26, 1900.
Stevenson, R. R.	Wisdom	March 9, 1898.
Mushback, J. E.	Red Lodge	Dec. 22, 1900.

Population of Montana by Counties and Minor Civil Divisions.

The Government Census Bulletin, June 1st, 1900, gives the following report of the population of the state:

Montana was organized as a territory May 26, 1864, and admitted as a state November 8, 1889. Table 1 shows the population of Montana at each census from 1870 to 1900, inclusive, together with the increase by number and per cent during each decade.

TABLE 1.—POPULATION OF MONTANA, 1870 TO 1900.

CENSUS YEARS.	POPULATION.	INCREASE.	
		Number.	Per Cent.
1900.....	243,329	111,170	84.1
1890.....	132,159	93,000	237.5
1880.....	39,159	18,564	90.1
1870.....	20,595		

The population of the state in 1900 is 243,329, as compared with a population in 1890 of 132,159, showing an increase during the decade of 111,170, or 84.1 per cent. A part of this increase is due to the fact that there were 10,346 Indians and 419 other persons, or a total of 10,765 persons, on Indian reservations, etc., in Montana, who were specially enumerated in 1890 under the provisions of the census act, but were not included in the general population of the state at that census. The population of the territory of Montana in 1870 was 20,595, and in 1889, 39,159, showing an increase of 18,564, or 90.1 per cent. During the following decade, from 1880 to 1890, in the last year of which the territory became a state, the population increased from 39,159 to 132,159, or 237.5 per cent. Although the numerical increase has been greater during the last decade than for any preceding one, the percentage of increase has declined.

The population of Montana in 1900 is more than eleven times as large as the population given for 1870, the first census taken after its organization as a territory in 1864.

The total land surface of Montana is, approximately, 145,310 square miles, the

average number of persons to the square mile at the censuses of 1890 and 1900 being as follows: 1890, 0.9; 1900, 1.7.

Table 2 shows the population of Montana by counties at each census from 1870 to 1900, inclusive, while table 3, which immediately follows, shows, for each county, the increase (or decrease) by number and per cent during the ten years from 1890 to 1900.

TABLE 2.—THE POPULATION OF MONTANA BY COUNTIES, 1870 TO 1900.

COUNTIES.	1900	1890.	1880.	1870.
The State	243,329	122,159	39,159	20,595
Beaverhead	5,615	4,955	2,712	722
Broadwater ¹	2,641			
Carbon ²	7,523			
Cascade ³	25,777	8,755		
Choteau ⁴	10,966	4,741	2,058	517
Custer ⁵	7,891	5,308	2,510	38
Dawson ⁶	2,443	2,054	190	177
Deer Lodge ⁷	17,398	15,155	8,876	4,367
Fergus ⁸	6,937	3,514		
Flathead ⁹	9,375			
Gallatin ¹⁰	9,553	6,346	3,642	1,578
Granite ¹¹	4,328			
Jefferson ¹²	5,330	6,036	2,464	1,321
Lewis and Clarke ¹³	19,171	19,145	6,581	5,040
Madison ¹⁴	7,695	4,692	3,915	2,684
Meagher ¹⁵	2,526	4,749	2,743	1,387
Missoula ¹⁶	13,964	14,427	2,537	2,654
Park ¹⁷	7,341	6,881		
Ravalli ¹⁸	7,823			
Silver Bow ¹⁹	47,635	23,744		
Sweet Grass ²⁰	3,086			
Teton ²¹	5,090			
Valley ²²	4,355			
Yellowstone ²³	6,212	2,095		
Crow Indian Reservation	2,660			

¹ Organized from parts of Jefferson and Meagher in 1897.

² Organized from parts of Park and Yellowstone in 1896.

³ Organized from parts of Choteau, Lewis and Clarke, and Meagher in 1887; part of Meagher annexed since 1890.

⁴ Parts taken to form Teton in 1893, and part of Cascade in 1887.

⁵ Name changed from Big Horn in 1877; part taken to form part of Yellowstone in 1881.

⁶ Valley organized from part of Dawson in 1893.

⁷ Parts taken to form Silver Bow in 1881 and Granite in 1893; parts annexed to Flathead and Lewis and Clarke since 1890.

⁸ Organized from part of Meagher in 1895.

⁹ Organized from part of Missoula in 1893; part of Deer Lodge subsequently annexed.

¹⁰ Parts taken to form Park in 1887 and part of Yellowstone in 1881.

¹¹ Organized from part of Deer Lodge in 1893.

¹² Part taken to form part of Broadwater in 1897.

¹³ Part taken to form part of Cascade in 1887; parts of Deer Lodge and Meagher annexed since 1890.

¹⁴ Parts taken to form Fergus in 1885, of Cascade in 1887, of Sweet Grass in 1896, and part of Broadwater in 1897; parts annexed to Cascade and Lewis and Clarke since 1890.

¹⁵ Parts taken to form Flathead and Ravalli in 1893.

¹⁶ Organized from part of Gallatin in 1887; parts taken to form part of Carbon and Sweet Grass in 1896.

¹⁷ Organized from part of Missoula in 1893.

¹⁸ Organized from part of Deer Lodge in 1881.

¹⁹ Organized from parts of Meagher, Park and Yellowstone in 1895.

²⁰ Organized from part of Choteau in 1893.

²¹ Organized from parts of Custer and Gallatin in 1881; parts taken to form parts of Carbon and Sweet Grass in 1896.

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TABLE 3—INCREASE IN POPULATION OF MONTANA BY COUNTIES, 1890 TO 1900.

COUNTIES.	INCREASE.	
	Number.	Per Cent.
The State	111,170	84.1
Beaverhead	900	.....
Broadwater	2,641	.....
Carbon	7,533	.....
Cascade	17,022	194.4
Choteau	6,225	131.2
Custer	2,563	48.7
Dawson	287	18.3
Deer Lodge	2,338	14.3
Fergus	3,422	97.4
Flathead	9,375	.....
Gallatin	3,307	52.9
Granite	4,228	.....
Jefferson	* 696	*11.5
Lewis and Clarke	26	0.1
Madison	3,003	84.0
Meagher	* 2,225	*46.3
Missoula	* 463	*8.2
Park	490	6.7
Ravalli	7,522	.....
Silver Bow	23,391	100.6
Sweet Grass	3,086	.....
Teton	5,080	.....
Valley	4,356	.....
Yellowstone	4,147	200.3
Crow Indian Reservation	2,600	.....

* Decrease

The following territorial changes in the counties of Montana have been made since 1890: Flathead organized from part of Missoula in 1893; Granite organized from part of Deer Lodge in 1893; Ravalli organized from part of Missoula in 1893; Teton organized from part of Choteau in 1893; Valley organized from part of Dawson in 1893; Carbon organized from parts of Park and Yellowstone in 1895; Sweet Grass organized from parts of Meagher, Park, and Yellowstone in 1895; Broadwater organized from parts of Jefferson and Meagher in 1897; parts of Deer Lodge annexed to Flathead and Lewis and Clarke; and parts of Meagher annexed to Cascade and Lewis and Clarke.

From the foregoing it appears that 8 counties, namely, Broadwater, Carbon, Flathead, Granite, Ravalli, Sweet Grass, Teton and Valley have been formed since 1890. Of the remaining 16 counties all but 3 have increased in population during the decade. The 3 that show a decrease in population, namely, Jefferson, Meagher and Missoula, have also suffered material losses in territory.

Table 4 shows the population of Montana by minor civil divisions, so far as it was separately returned at the censuses of 1890 and 1900.

POPULATION OF MONTANA BY MINOR CIVIL DIVISIONS.

MINOR AND CIVIL DIVISIONS.	1900.
BEAVERHEAD COUNTY1.....	5,615
Argenta township	106
Bannock township	412
Barretts township	207
Birch Creek township	180
Bishop township	112
Blacktail township	106
Bowen township or Big Hole 15	141
Dell township	143
Dewey township	115
Dillon township, including Dillon city	1,721
Dillon city	1,630

MINOR AND CIVIL DIVISIONS.		1900.
Ward 1.	584	
Ward 2.	600	
Ward 3.	206	
Fox township		333
Glendale township		300
Hecta township		136
Horse Prairie township		220
Lima township		631
Pioneer township		33
Polaris township		123
Red Rock township		121
Wisdom township or Big Hole ls.		366
BROADWATER COUNTY.		2,641
Blackwells township.		83
Canton township		277
Diamond City township		123
Hassel or St. Louis township		120
Jefferson River township		39
Lombard township		28
Radersburg township		365
Toston township		187
Townsend township, including Townsendtown		395
Townsend town		446
Winston or Placer township		585
CARBON COUNTY.		7,533
Bowler township		96
Clarks Fork township		1,329
Joliet township		1,236
Red Lodge township, including Red Lodgetown		3,015
Red Lodge town		2,163
Ward 1.	853	
Ward 2.	860	
Ward 3.	600	
Red Lodge Creek township		537
Reno township		197
Stillwater township		743
CASCADE COUNTY.		25,777
Barker township		230
Belt township		2,958
Cascade township		706
Chestnut township		308
Geyser township		294
Great Falls township, including wards 1, 2, 3 and part of ward 4 of Great Falls city		13,201
Falls city		13,052
Great Falls city (part of)		14,900
Total for Great Falls city, in Great Falls and Watson townships		
Ward 1.	2,599	
Ward 2.	1,800	
Ward 3.	2,804	
Ward 4.	7,537	
Kibbey township		600
Nelhart township, including Nelhart town		944
Nelhart town		533
Sand Coulee township		2,900
Sun River township		687
Truly township		531
Watson township, including part of ward 4 of Great Falls city		2,228
Great Falls city (part of)		1,577
CHOTEAU COUNTY.		10,968
Big Sandy township		767
Chinook township		1,636
Fort Benton township, including Fort Benton town		2,361
Fort Benton town		1,034
Harlem township		621
Havre township, including Havre town		2,322
Havre town		1,022
Highwood township		574
Landusky township		146

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MINOR AND CIVIL DIVISIONS.	1900.
Sweet Grass township	717
Fort Belknap Indian reservation	1,313
CUSTER COUNTY:	7,891
Miles City	1,938
Ward 1.	975
Ward 2.	963
Northern Cheyenne Indian reservation	1,454
DAWSON COUNTY:	2,443
Glendive township	1,435
Minusville township	323
Newlon township	450
Pearmond township	220
DEER LODGE COUNTY:	17,398
Anaconda township, including Anaconda	12,375
Anaconda city	9,453
Ward 1.	1,438
Ward 2.	1,356
Ward 3.	800
Ward 4.	1,417
Ward 5.	2,163
Ward 6.	2,376
Cottonwood township, including Deer Lodge town	2,220
Deer Lodge town	1,324
Gold Creek township	900
Lincoln township	1,000
Ophir township	929
FERGUS COUNTY:	6,937
Cottonwood district	764
Deerfield district	550
Edge, Malden and Grass Range district	1,163
Flat Willow district	270
Halbert-Highfield district	330
Lavina district	323
Lewistown district, including Lewistown village	1,936
Lewistown village	1,096
Philbrook and Ubat district	731
Utica, Denton and Stanford district	990
FLATHEAD COUNTY:	9,375
Columbian township	1,192
Flathead township	683
Joeko township	1,576
Kallispell township, including Kallispell city	4,496
Kallispell city	2,526
Libby township	831
Tobacco Plains township	353
Troy township	342
Flathead Indian reservation (part of)	13
Total for Flathead Indian reservation, in Flathead and Missoula counties	2,143
GALLATIN COUNTY:	9,653
Baker precinct	319
Belgrade precinct	597
Boseman city, in East, South and West Boseman precincts	3,419
Ward 1.	1,043
Ward 2.	573
Ward 3.	920
Ward 4.	584
Bridger precinct	244
Chestnut precinct	506
Connel precinct	304
East Boseman precinct, exclusive of part of Boseman city	40
Flathead precinct	394
Gallatin precinct	333
Hilledale precinct	250
Madison precinct	123

MINOR AND CIVIL DIVISIONS.	1900.
Manhattan precinct Middle Creek precinct Monforten precinct Reese Creek precinct Salsville precinct South Bosaman precinct, exclusive of part of Bosaman city Spanish Creek precinct Springhill precinct Three Forks precinct West Bosaman precinct, exclusive of part of Bosaman city West Gallatin precinct Willow Creek precinct	200 200 200 194 431 202 30 228 30 678 216 221
GRANITE COUNTY:.....	4,138
Bearmouth precinct Bimetastic precinct Combination precinct Drummond precinct Garnet precinct Granite precinct Head of Gold Creek precinct New Chicago precinct North Philipsburg precinct, ³ including part of Philipsburg city Philipsburg city (part of) Total for Philipsburg city, in North and South Philipsburg precinct. Princeton precinct Quigley precinct Red Lion precinct Royal precinct Rumsey precinct South Philipsburg precinct, ³ including part of Philipsburg city Philipsburg city (part of) Stone Station precinct Sunrise precinct	147 128 61 206 202 1,079 32 288 706 660 906 74 54 30 7 8 8 871 445 148 43
JEFFERSON COUNTY:.....	5,830
Township No. 2..... Township No. 4..... Township No. 5..... Township No. 6..... Township No. 7..... Township No. 8..... Township No. 9..... Township No. 11..... Township No. 12.....	930 761 695 227 582 178 108 66 1,603
LEWIS AND CLARKE COUNTY:.....	19,171
Belmont township Helena city, in township 10, north, ranges 3 and 4, west Ward 1..... Ward 2..... Ward 3..... Ward 4..... Ward 5..... Ward 6..... Ward 7..... Township 2, north, range 5, west (fractional) Township 2, north, range 6, west (fractional) Township 2, north, range 3, west (fractional) Township 2, north, range 4, west (fractional) Township 2, north, range 5, west..... Township 2, north, range 6, west (fractional) Township 10, north, range 1, west (fractional) Township 10, north, range 2, west Township 10, north, range 3, west, exclusive of part of Helena city..... Township 10, north, range 4, west, exclusive of part of Helena city .. Township 10, north, range 5, west (fractional) Township 10, north, range 6, west (fractional) Township 11, north, range 1, east..... Township 11, north, range 1, west Township 11, north, range 2, west (fractional) Township 11, north, range 3, west Township 11, north, range 1, west	2,747 10,770 1,308 960 1,072 1,300 1,420 1,510 2,960 41 (5) 5 108 84 39 107 296 1,614 537 222 (5) 45 120 103 150 34

MINOR AND CIVIL DIVISIONS.		1900.
Township 12, north, range 2, west (fractional)	33	
Township 12, north, range 3, west	8	
Township 12, north, range 4, west	32	
Township 12, north, range 5, west	7	
Township 12, north, range 6, west	14	
Township 12, north, range 7, west	90	
Township 12, north, range 8, west	40	
Township 12, north, range 9, west	16	
Township 12, north, range 10, west (fractional)	30	
Township 12, north, range 11, west	9	
Township 14, north, range 2, west	38	
Township 14, north, range 3, west (fractional)	12	
Township 14, north, range 4, west	68	
Township 14, north, range 5, west	25	
Township 14, north, range 6, west	43	
Township 14, north, range 7, west	19	
Township 14, north, range 8, west	86	
Township 14, north, range 9, west	11	
Township 15, north, range 2, west (fractional)	181	
Township 15, north, range 3, west	137	
Township 15, north, range 4, west	14	
Township 15, north, range 5, west	85	
Township 15, north, range 6, west	18	
Township 15, north, range 7, west	6	
Township 15, north, range 8, west	27	
Township 15, north, range 9, west	96	
Township 15, north, range 10, west	27	
Township 15, north, range 11, west	18	
Township 17, north, range 2, west (fractional)	49	
Township 17, north, range 3, west	14	
Township 17, north, range 4, west	27	
Township 17, north, range 5, west	74	
Township 17, north, range 6, west	10	
Township 17, north, range 7, west	46	
Township 17, north, range 8, west	53	
Township 17, north, range 9, west	70	
Township 17, north, range 10, west	15	
Township 17, north, range 11, west	30	
Township 17, north, range 12, west	49	
Township 17, north, range 13, west	75	
Township 17, north, range 14, west (fractional)	27	
Township 20, north, range 4, west (fractional)	28	
Township 20, north, range 5, west (fractional)	39	
Township 20, north, range 6, west	195	
Township 20, north, range 7, west	30	
Township 20, north, range 8, west	45	
Township 21, north, range 6, west (fractional)	(8)	
Township 21, north, range 7, west (fractional)	23	
Unsurveyed territory north of 4th Standard Parallel Line	68	
MADISON COUNTY:15	7,696	
Sheridan town	581	
Virginia City	568	
MEADDER COUNTY:16	2,536	
Belt township	313	
Bernal precinct	32	
Big Elk precinct	161	
Brewer township, including White Sulphur Springs town	925	
White Sulphur Springs town	446	
Castle Mountain township	332	
Martinsdale precinct	45	
Musselshell precinct	578	
Oka precinct	22	
Winnecook precinct	107	
MISSOULA COUNTY:17	12,964	
Cedar township	1,508	
Frenchtown township	1,240	
Hellgate township, including Missoula city	7,751	
Missoula city	4,286	
Ward 1	977	
Ward 2	1,111	

MINOR AND CIVIL DIVISIONS.		1900.
(Ward 3....)		499
Ward 4....		1,730
Not located in wards....		30
Jocko township....		967
Smead township....		146
Thompson township....		514
Flathead Indian reservation (part of)....		2,139
(For total see Flathead county)		.
PARK COUNTY....		7,841
Precinct 1, comprising ward 1 of Livingston city....		1,034
Total for Livingston city, co-extensive with precincts 1, 2, and 3....		2,778
Ward 1....		1,034
Ward 2....		730
Ward 3....		1,034
Precinct 2, comprising ward 2 of Livingston city....		730
Precinct 3, comprising ward 3 of Livingston city....		1,034
Precinct 4, Cokedale....		307
Precinct 5, Friday....		100
Precinct 6, Tom Miner Basin....		355
Precinct 7, Horr....		643
Precinct 8, Aldridge....		94
Precinct 9, Cinabar....		183
Precinct 10, Cinabar....		49
Precinct 11, Cooke....		378
Precinct 12, Jardine....		390
Precinct 13, Chico....		111
Precinct 14, South Cascade....		134
Precinct 15, Richland....		284
Precinct 16, Trail Creek....		171
Precinct 17, Lower Mission....		94
Precinct 18, Upper Mission....		77
Precinct 19, West Boulder....		77
Precinct 20, Contact....		282
Precinct 21, Hunters Hot Springs....		463
Precinct 22, Shields River....		123
Precinct 23, Cottonwood....		130
Precinct 24, Myersburg....		64
Precinct 25, Murphy....		59
Precinct 26, Muir....		43
Precinct 27, Lat....		185
Precinct 28, North Cascade....		
RAVALLI COUNTY....		7,322
Hamilton town....		1,257
Stevensville town....		346
Victor town....		136
SILVER BOW COUNTY....		67,635
Township 1, Walkerville, including Walkerville city....		2,905
Walkerville city....		2,621
Ward 1....		736
Ward 2....		782
Ward 3....		1,108
Township 2, Meaderville....		1,535
Township 3, Red Mountain....		587
Township 4, German....		
Township 5, Silver Bow, including wards 1, 2, 3, 4, 5, 6 and parts of		
wards 7 and 8 of Butte City....		26,135
Butte city (part of)....		25,083
Total for Butte city, in townships 5 and 6....		50,470
Ward 1....		2,190
Ward 2....		4,268
Ward 3....		4,311
Ward 4....		2,166
Ward 5....		2,937
Ward 6....		2,974
Ward 7....		4,680
Ward 8....		5,965
Township 6, South Butte, including parts wards 7 and 8 of Butte City...		5,580
Butte City (part of)....		2,457

MINOR AND CIVIL DIVISIONS.		1890.
SWEET GRASS COUNTY¹.....		3,088
Big Timber township		1,629
Melville township		723
Stillwater township		735
TETON COUNTY².....		5,080
Choteau township		1,439
Dupuyer township		724
Marias township		800
St. Mary township		111
Blackfeet Indian reservation		2,354
VALLEY COUNTY³.....		4,355
Culbertson township		283
Glasgow township		1,078
Matte township		650
Saco township		313
Springdale township		106
Fort Peck Indian reservation		1,948
YELLOWSTONE COUNTY⁴.....		6,212
Canyon Creek precinct		374
Columbus precinct		430
Fairview precinct		99
Junction precinct		147
Laurel precinct		388
Musselshell precinct		283
North Billings precinct, including wards 1 and 2 of Billings city		1,877
Billings city (part of)		1,601
Total for Billings city, in North and South Billings precincts		3,221
Ward 1.....	851	
Ward 2.....	750	
Ward 3.....	768	
Ward 4.....	853	
Park City precinct		433
Roundup precinct		57
South Billings precinct, including wards 3 and 2 of Billings city		1,377
Billings city (part of)		1,620
Thomas Ranch precinct		50
Upper Musselshell precinct		35
CROW INDIAN RESERVATION⁵.....		2,900

¹ Comparison with population for 1890 can not be made; information as to changes in minor civil divisions incomplete.

² Organized from parts of Jefferson and Meagher counties in 1897.

³ Organized from parts of Park and Yellowstone counties in 1896.

⁴ Part of Meagher county annexed since 1890. Comparison with population for 1890 can not be made; information as to changes in minor civil divisions incomplete.

⁵ Part taken to form Teton county in 1893. Not returned by townships in 1890.

⁶ Not returned by townships or precincts.

⁷ Part taken to form Valley county in 1893. Not returned by townships in 1890.

⁸ Part taken to form Granite county in 1893 and parts annexed to Flathead and Lewis and Clarke counties since 1890. Not returned by townships in 1890.

⁹ Not returned by districts in 1890.

¹⁰ Organized from part of Missoula county in 1893; part of Deer Lodge county subsequently annexed.

¹¹ Comparison with population for 1890 can not be made; county redistricted since 1890.

¹² Organized from part of Deer Lodge county in 1893.

¹³ Includes part of Upper Flint Creek valley and Red Rock county, from Hogback to Moose Lake.

¹⁴ Part taken to form part of Broadwater county in 1897. Comparison with population for 1890 can not be made; county redistricted since 1890.

¹⁵ Parts of Deer Lodge and Meagher counties annexed since 1890. Comparison with population for 1890 can not be made; information as to changes in minor civil divisions incomplete.

(5) No population returned

16 Not returned by townships or precincts.

17 Parts taken to form part of Sweet Grass county in 1886 and part of Broadwater county in 1897; parts annexed to Cascade and to Lewis and Clarke counties since 1890. Not returned by townships or precincts in 1890.

18 Corvallis and Flathead townships taken to form Flathead county, and Skalkaho and Stevens townships taken to form Ravalli county in 1883.

19 Smead township organized from part of Thompson township since 1890.

20 Parts taken to form parts of Carbon and Sweet Grass counties in 1886. Comparison with population of 1890 can not be made; information as to changes in minor civil divisions incomplete.

21 Organized from part of Missoula county in 1883. Not returned by townships or precincts.

22 Not returned by townships in 1890.

23 Organized from parts of Meagher, Park and Yellowstone counties in 1886.

24 Organized from part of Choteau county in 1890.

25 Organized from part of Dawson county in 1892.

26 Parts taken to form parts of Carbon and Sweet Grass counties in 1886. Comparison with population of 1890 can not be made; information as to changes in minor civil divisions incomplete.

27 Not a part of any county.

There are 26 incorporated cities, towns and villages in Montana, for which the population in 1900 is separately returned, and these incorporated places are presented in table 5 in alphabetical order, being abstracted from table 4, in which they are presented in detail under the counties in which they are severally situated.

TABLE NO. 5.—POPULATION OF THE INCORPORATED CITIES, TOWNS AND VILLAGES OF MONTANA, 1890 AND 1900.

Cities, Towns and Villages.	Population		Cities, Towns and Villages.	Population	
	1900.	1890.		1900.	1890.
Anaconda city	9,453	3,976	Livingston city	2,779	2,860
Billings city	3,221	836	Miles City	1,928	956
Bozeman city	3,419	2,143	Missoula city	4,969	5,426
Butte city	30,470	10,723	Nehart town	523	.....
Deer Lodge town	1,334	1,463	Phillipsburg city	895	1,053
Dillon city	1,530	1,012	Red Lodge town	2,153	634
Fort Benton town	1,034	624	Sheridan town	521	297
Great Falls city	14,930	3,973	Stevensville town	345	.....
Hamilton town	1,257	.....	Townsend town	445	245
Havre town	1,023	.....	Victor town	120	.....
Helena city	10,770	13,834	Virginia City	568	675
Kalispell city	2,826	.....	Walkerville city	2,421	1,748
Lewistown village	1,096	.....	White Sulphur Springs	448	640

Of the above named 26 incorporated places 15 have less and 11 have more than 2,000 inhabitants. Of the latter the 4 largest cities are Butte, with 30,470; Great Falls with 14,930; Helena, with 10,770; and Anaconda, with 9,453 inhabitants.

County Officials

LIST OF COUNTY OFFICIALS OF BEAVERHEAD COUNTY.

Office.	Name and Politics.	Address.
District Judge	M. H. Parker, Democrat	Boulder.
Sheriff	Chas. H. Padley, Democrat	Dillon.
Treasurer	Geo. Edinger, Democrat	Dillon.
County Clerk and Recorder	Wm. L. Staudaher, Democrat	Dillon.
County Assessor	Chas. W. Conger, Republican	Dillon.
Clerk of District Court	Geo. W. French, Democrat	Dillon.
County Attorney	Joseph B. Poindexter, Democrat, ...	Dillon.
Sup't. of Public Schools	Isabelle Rife, Democrat	Dillon.
County Coroner	James L. Jones, Democrat	Dillon.
Public Administrator	Al E. Graeter, Democrat	Dillon.
County Surveyor	Geo. R. Metlen	Dillon.
County Commissioners	T. F. Barrett	Grant.
	Alvin Anderson	Dillon.
	Wm. Montgomery	Wisdom.
State Senator	James P. Murray, Democrat	Dillon.
Members of House of Representatives..	David E. Metlen, Democrat	Dillon.
	Emerson Hill, Democrat	Red Rock.

The County Commissioners elected November 6th, 1900, who take office January 1st, 1900, are David McKnight, Democrat, Dell; Wason M. Oliver, Democrat, Dillon; Wm. Montgomery, Democrat, Dillon.

Justices of the Peace: Chas. Hirschman, Dillon; Thos. Judge, Polaris; J. A. Clinton, Lima; Sam'l. Jagers, Grant; H. Jast, Lima.

LIST OF COUNTY OFFICIALS OF BROADWATER COUNTY.

Office.	Name and Politics.	Address.
District Judge	Wm. L. Holloway, Republican	Roseman.
Sheriff	G. E. Poole, Democrat	Townsend.
Treasurer	M. Gurnett, Democrat	Townsend.
County Clerk and Recorder	B. S. Coad, Democrat	Townsend.
Assessor	Charles Dogget, Democrat	Townsend.
Clerk of District Court	Fred Bubser, Democrat	Townsend.
County Attorney	E. H. Goodman, Democrat	Townsend.
Sup't. of Public Schools	Eva Harrington, Democrat	Townsend.
Coroner	Charles Malone, Democrat	Winston.
Public Administrator	Elmer Lytle, Democrat	Winston.
County Surveyor	Frank L. Currie, Democrat	Townsend.
County Commissioners	E. P. Durnen, ...	Winston.
	W. W. Harvey	Townsend.
	B. F. Bembrick	Toston.
State Senator	W. E. Tierney, Democrat	Townsend.
Members of House of Representatives..	Lloyd Cannon, Democrat	Winston.
	A. B. Rossman, Democrat	Radersburg.

Justices of the Peace: H. L. Keene, Canton; C. W. Reynolds, Winston.

LIST OF COUNTY OFFICIALS OF CARBON COUNTY.

Office.	Name and Politics.	Address.
District Judge	Frank Henry, Republican	Livingston.
Sheriff	M. W. Potter Republican	Red Lodge.
Treasurer	C. E. Wright, Republican	Red Lodge.
County Clerk and Recorder	Jesse Smith, Republican	Red Lodge.
Assessor	W. R. Crockett, Republican	Red Lodge.
Clerk of District Court	E. E. Esselstyn, Republican	Red Lodge.
County Attorney	S. O. Casawell, Republican	Red Lodge.
Sup't. of Public Schools	Miss Martha Dilworth, Republican	Red Lodge.
County Coroner	Dr. B. B. Kelley, Republican	Red Lodge.
Public Administrator	David Smethurst, Republican	Red Lodge.
County Surveyor	F. W. Hine, Republican	Red Lodge.
County Commissioners	W. F. Tincom	Red Lodge.
	Harry Duffield	Joliet.
	John Mulherin	Absarokee.
State Senator	W. F. Meyer, Republican	Red Lodge.
Members of House of Representatives..	C. H. Gregory, Republican	Gebo.

The County Commissioners elected November 6th, 1900, and who will take office on January 1st, 1903, are J. J. Frank, Republican; W. B. Nutting, Republican; H. J. Smith, Republican.

Justices of the Peace: David Hawthorne, Red Lodge; Edward Morgan, Red Lodge; H. E. Wolfe, Gebo; Rodney Stone, Bridger; Henry Williams, Bridger; William Reno Bridger; John Lindsay, Carbonado; Chas. Oliver, Joliet; R. O. Morris, Absarokee; John W. Brown, Absarokee; M. O. Magee, Absarokee; Harry Ellis, Absarokee.

LIST OF COUNTY OFFICIALS OF CASCADE COUNTY.

Office.	Name and Politics.	Address.
District Judge	J. B. Leslie, Democrat	Great Falls.
Sheriff	H. E. Benner, Democrat	Great Falls.
Treasurer	O. F. Wadsworth, Jr., Democrat	Great Falls.
County Clerk and Recorder	Vincent Fortune, Democrat	Great Falls.
Assessor	Nat McGiffin, Republican	Great Falls.
Clerk of District Court	J. T. Athey, Republican	Great Falls.
County Attorney	A. C. Gormley, Democrat	Great Falls.
Sup't. of Public Schools	Martha A. Kearns, Democrat	Belt.
Auditor	John Carr, Democrat	Great Falls.
Coroner	C. T. Sweeney, Democrat	Great Falls.
Public Administrator	R. W. Hanson, Democrat	Great Falls.
County Surveyor	O. C. Mortson, Democrat	Great Falls.
County Commissioners	John J. Patterson	Great Falls.
	B. P. McNair	Great Falls.
	James Erickson	Great Falls.
State Senator	Geo. H. Stanton, Democrat	Great Falls.
Members of House of Representatives..	S. R. Jensen, Populist	Great Falls.
	Thos. F. Richardson, Populist	Great Falls.
	Geo. R. Woods, Democrat	Great Falls.
	Chas. H. Conner, Labor	Belt.
	R. P. Thoroughman, Democrat	Cascade.

The County Commissioners elected November 6th, 1900, and who will take office January 1st, 1903, are W. D. Delphy, Democrat, Monarch; Louis Roalswick, Republican, Nelhart; F. D. Cooper, Republican, Cascade.

Justices of the Peace: W. H. Race, Great Falls; W. H. Safford, Great Falls; Frank Warner, Cascade; Luther Mills, Nelhart; B. P. Fitzpatrick, Nelhart; W. F. Oden, Nelhart; D. J. Dolsen, Stockett; T. W. McKeown, Stockett; J. J. G. Burns, Belt; M. Foley, Belt; E. Nebel, Kibbey; W. Gunn, Kibbey.

Townships same as addresses.

LIST OF COUNTY OFFICIALS OF CHOTEAU COUNTY.

Office.	Name and Politics.	Address.
District Judge	Edwin K. Cheadle, Republican	Lewistown.
Sheriff	Thos. Clary, Fusion	Fort Benton
Treasurer	D. G. Lockwood, Republican	Fort Benton
County Clerk and Recorder	E. Frank Sayre, Republican	Fort Benton
Assessor	John C. Sullivan, Republican	Fort Benton
Clerk of District Court	Chas. H. Boyle, Republican	Fort Benton
County Attorney	Chas. N. Pray, Republican	Fort Benton
Sup't. of Public Schools	Miss May Flanagan, Republican	Fort Benton
Coroner	C. F. Hopkins, Republican	Chinook
Public Administrator	W. O. Dexter, Republican	Fort Benton
County Surveyor	A. W. Merrifield, Republican	Chinook
County Commissioners	Geo. F. Lewis	Fort Benton
	J. D. Thompson	Havre.
	Chas. A. Smith	Harlem.
State Senator	Benj. D. Phillips, Republican	Phillips.
Members of the Legislature	George B. Bourne, Republican	Hill.
	John F. Patterson, Republican	Fort Benton

County Commissioners elected November 6th, 1900, who take office on January 1st, 1902, are Geo. F. Lewis, Republican, Fort Benton; A. H. Reser, Republican, Chinook; W. E. French, Republican, Harlem.

Justices of the Peace: Jere Sullivan, Fort Benton; Henry J. Melli, Havre; Manning, Landusky; John T. Throop, Landusky; Maurice C. Price, Hill; John Manning, Sandusky; John T. Throop, Sandusky; Maurice C. Price, Hill; John McDowell, Gold Butte.

LIST OF COUNTY OFFICIALS OF CUSTER COUNTY.

Office.	Name and Politics.	Address.
District Judge	C. H. Loud, Republican	Miles City.
Sheriff	W. E. Savage, Republican	Miles City.
Treasurer	J. R. McKay, Republican	Miles City.
County Clerk and Recorder	A. H. Swerdfiger, Republican	Miles City.
Assessor	E. F. Crosby, Republican	Miles City.
County Attorney	J. H. Johnson, Republican	Miles City.
Clerk of District Court	A. T. McAusland, Republican	Miles City.
Sup't. of Public Schools	Laura Zook, Democrat	Miles City.
Coroner	Joseph Bateman, Republican	Miles City.
Public Administrator	H. B. Twombly, Republican	Miles City.
County Surveyor	George Scheets, Democrat	Miles City.
County Commissioners	Joseph E. Farnum	Miles City.
	Arthur Bittle	Miles City.
	Robert G. Wear	Ekalaka.
State Senator	Kenneth McLean, Republican	Miles City.
Members of House of Representatives..	E. S. Becker, Republican	Forsyth.
	C. D. Newbary, Republican	Ekalaka.

The County Commissioners elected November 6th, 1900, and who take office January 1st, 1902, are M. G. Maples, Republican; J. W. Stith, Republican, and C. S. Bull, Republican.

Justices of the Peace: A. W. Kennle, Miles City; Emil Bircher, Miles City; E. M. Huff, Forsyth; C. C. Gates, Forsyth; Wm. Bray, Sr., Rosebud; A. B. Snow, Terry; Amos Lambert, Sr., Ekalaka; Sam'l. Clem, Alsada; W. A. Armstrong, Midland.

LIST OF COUNTY OFFICIALS OF DAWSON COUNTY.

Office.	Name and Politics.	Address.
District Judge	C. H. Loud, Republican	Miles City.
Sheriff	John Kennedy, Republican	Glendive.
Treasurer	Hope S. Davis, Republican	Glendive.
County Clerk and Recorder	R. L. Wyman, Republican	Glendive.
Assessor	Anton H. Johnson, Republican	Glendive.
Clerk of District Court	James Rivenes, Republican	Glendive.
County Attorney	Thomas C. Holmes, Republican	Glendive.
Sup't. of Public Schools	Grace Skinner, Republican	Glendive.
Coroner	B. J. Washington, Republican	Glendive.
Public Administrator	Wm. Lowe, Republican	Glendive.
County Surveyor	R. R. Cummins, Republican	Glendive.
County Commissioners	C. L. Brown	Glendive.
	Chas. R. Noble	Glendive.
	Alex. M. Baird	Wibaux.
State Senator	T. P. Cullen, Democrat	Glendive.
Member of House of Representatives...	Geo. McCone, Republican	Tonka.

County Commissioners elected November 6th, 1900, who will take office on January 1st, 1902, are J. A. Morton, Republican; W. C. Gleason, Republican, and A. M. Baird, Republican.

Justices of the Peace: John Gillis, Glendive; J. H. Ray, Jr., Glendive; John Brophy, Wibaux; H. R. Green, Wibaux; C. T. Stanhope, Sidney; A. A. Frederickson, Tonka.

LIST OF COUNTY OFFICIALS OF DEER LODGE COUNTY.

Office.	Name and Politics.	Address.
District Judge	Wellington Napton, Democrat	Anaconda.
Sheriff	Jack Conley, Democrat	Anaconda.
Treasurer	P. D. Twohy, Democrat	Anaconda.
County Clerk and Recorder	Phillip Greenan, Democrat	Anaconda.
Assessor	Geo. S. Miller, Democrat	Anaconda.
Clerk of Court	Wm. E. Thomas, Republican	Anaconda.
County Attorney	J. H. Duffy, Democrat	Anaconda.
Sup't. of Schools	Mary McLaughlin, Democrat	Anaconda.
Auditor		
Coroner	Joseph Hughes, Democrat	Anaconda.
Administrator	J. Y. Batterton, Democrat	Deer Lodge.
Surveyor	W. E. Pinegar, Democrat	Anaconda.
County Commissioners	A. M. Walker, Democrat	Anaconda.
	James W. Geary, Democrat	Heimville.
	T. C. Davidson, Republican	Anaconda.
State Senator	J. M. Kennedy, Fusion	Anaconda.
Members of House of Representatives...	John R. Toole, Democrat	Anaconda.
	Thomas McTague, Democrat	Deer Lodge.
	J. M. Madden, Democrat	Anaconda.
	Michael Geary, Democrat	Heimville.
	Joseph E. McDonnell, Democrat	Anaconda.
	John Bielenberg, Republican	Deer Lodge.

County Commissioners elected November, 6th, 1900, who take office on January 1st, 1902, are James W. Geary, Democrat; Wm. Keillher, Democrat, and Henry B. Hoffman, Republican.

Justices of the Peace: Frank Kennedy, Anaconda; James Quane, Anaconda; Orren Emerson, Deer Lodge; W. L. Powell, Deer Lodge.

LIST OF COUNTY OFFICIALS OF FERGUS COUNTY.

Office.	Name and Politics.	Address.
District Judge	Edwin K. Cheadle, Republican	Lewistown.
Sheriff	Thomas M. Shaw, Democrat	Lewistown.
Treasurer	James M. Croft, Republican	Lewistown.
County Clerk and Recorder	Chas. M. Kelley, Republican	Lewistown.
Assessor	Donald Fowler, Republican	Lewistown.
Clerk of District Court	Edmund Wright, Republican	Lewistown.
County Attorney	Oliver W. Beiden, Republican	Lewistown.
Sup't. of Public Schools	Elizabeth S. Peebles, Republican	Lewistown.
Coroner	O. F. David, Republican	Utica.
Public Administrator	Wm. T. McFarland, Republican	Lewistown.
County Surveyor	Geo. M. Stafford, Republican	Lewistown.
County Commissioners	Samuel Phillips	Lewistown.
	Jacob S. Corbly	Lewistown.
	Daniel W. Slayton	Folsom.
State Senator	Simeon S. Hobson, Republican	Utica.
Members of House of Representatives..	Wyllis A. Hedges, Republican	Yale.
	Alex. B. Lehman, Republican	Lewistown.

The County Commissioners elected November 6th, 1900, and who will take office on January 1st, 1902, are Wm. T. Neill, Republican, Garnett; Samuel Phillips, Republican, Lewistown, and Jas. B. Washburn, Republican, Gilt Edge.

Justices of the Peace: O. W. Metcalf and John Bohslet, Dubuque; William Jackson and J. S. Phillips, Utica; D. S. Lutz and W. H. Barney, Garnett; F. F. Mac Gowan, Robert Gudgeon, Lewistown; Orlando Sawyer, Gilt Edge; C. B. Wallace, Musselshell; J. G. Sherman, Flat Willow.

LIST OF COUNTY OFFICIALS OF FLATHEAD COUNTY.

Office.	Name and Politics.	Address.
District Judge	D. F. Smith, Democrat	Kalispell.
Sheriff	Thomas C. Hand, Democrat	Kalispell.
Treasurer	Sam Hilburn, Democrat	Kalispell.
County Clerk and Recorder	August Lagoni, Democrat	Kalispell.
Assessor	Andrew Dunsire, Democrat	Kalispell.
Clerk of Court	James K. Lang, Democrat	Kalispell.
County Attorney	R. L. Oliver, Democrat	Columbia Falls.
Sup't. of Public Schools	Fannie L. Spurek, Democrat	Kalispell.
Coroner	Nelson Willoughby, Republican ..	Columbia Falls.
Administrator	J. J. Kennedy, Democrat	Columbia Falls.
Surveyor	Burton S. Adams, Republican	Kalispell.
County Commissioners	David Greig	Kalispell.
	W. H. Griffin	Kalispell.
	H. O. Christensen	Kalispell.
State Senator	J. H. Gelger, Republican	Kalispell.
Members of House of Representatives..	W. G. Fitzpatrick, Democrat	Columbia Falls.
	B. J. McIntire, Republican	Kalispell.
	L. H. Faust, Republican	Libby.

No County Commissioners elected.

Justices of the Peace: M. J. Sullivan, Jacob Billings, O. G. Cornish, Kalispell; W. H. Meyers, Thomas Carroll and Henry Miller, Columbia Falls; J. W. Frost and George Copeland, Tobacco; P. H. Dempsey, Dayton; H. Bockman and C. R. Hoffman, Libbey; W. A. Raymond and George A. Davis, Troy.

LIST OF COUNTY OFFICIALS OF GALLATIN COUNTY.

Office.	Name and Politics.	Address.
District Judge	Wm. M. Holloway, Republican	Bozeman.
Sheriff	Thomas J. Fowler, Republican	Bozeman.
Treasurer	W. H. Davis, Democrat	Bozeman.
County Clerk and Recorder	E. V. Blankenship, Democrat	Bozeman.
Assessor	David S. McLoud, Democrat	Bozeman.
Clerk of District Court	Charles B. Anderson, Republican	Bozeman.
County Attorney	George D. Pease, Republican	Bozeman.
Sup't. of Public Schools	Mary E. Chrisman, Democrat	Bozeman.
Coroner	Robert R. Finley, Democrat	Bozeman.
Public Administrator	Josephus P. Martin, Democrat	Bozeman.
County Surveyor	C. M. Thorpe, Democrat	Bozeman.
County Commissioners	Geo. W. Ellis	Bozeman.
	J. L. Patterson	Bozeman.
	Don Cameron	Belgrade.
State Senator	C. W. Hoffman, Democrat	Bozeman.
Members of House of Representatives..	James E. Martin, Democrat	Bozeman.
	W. A. Roland, Republican	Logan.
	Wesley C. Newton, Republican	Bozeman.

The County Commissioners elected November 6th, 1900, and who will take office on January 1st, 1902, are E. F. Sawyer, Democrat; Geo. E. Davis, Republican, and Thomas S. Kirk, Republican.

Justices of the Peace: A. D. McPherson and W. Y. Smith, Bozeman; John J. Reese and J. G. Swetland, Belgrade; Oliver Scow and Peter Van Dyken, Manhattan; Owen E. Thomas, Logan; Lewis Brandenburg, Willow Creek.

LIST OF COUNTY OFFICIALS OF GRANITE COUNTY.

Office.	Name and Politics.	Address.
District Judge	Wellington Napton, Democrat	Anaconda.
Sheriff	George Metcalf, Fusion	Phillipsburg.
Treasurer	O. F. Featherman, Democrat	Drummond.
County Clerk and Recorder	John Neu, Fusion	Phillipsburg.
County Assessor	Thos. F. Hynes, Fusion	Granite.
Clerk of District Court	James E. Abbey, Fusion	Phillipsburg.
County Attorney	David M. Durfee, Fusion	Granite.
Sup't. of Public Schools	Marla C. Ryan, Fusion	Phillipsburg.
County Coroner	Robert W. Getty, Fusion	Phillipsburg.
Public Administrator	W. T. Allison Fusion	Phillipsburg.
County Surveyor	Charles F. Donyes, Fusion	Phillipsburg.
County Commissioners	James B. Featherman	Drummond.
	H. R. Campbell	Quigley.
	David W. Hennessey	Stone Station.
State Senator	Jerry Connolly, Populist	Garnett.
Members of House of Representatives..	Thomas F. Ward Democrat	Garnett.
	Henry Lewney, Populist	Granite.

LIST OF COUNTY OFFICIALS OF JEFFERSON COUNTY.

Office.	Name and Politics.	Address.
District Judge	M. H. Parker, Democrat	Boulder.
Sheriff	Henry L. Sherlock, Democrat	Boulder.
Treasurer	Sherman F. Tuttle, Democrat	Boulder.
County Clerk and Recorder	Charles Scharf, Democrat	Boulder.
Assessor	John T. Murphy, Democrat	Boulder.
Clerk of District Court	A. J. Holloway, Democrat	Boulder.
County Attorney	J. H. Murphy, Democrat	Boulder.
Sup't. of Public Schools	Jennie Flicher, Republican	Boulder.
Coroner	C. A. McNulty, Democrat	Boulder.
Public Administrator	Z. N. Thompson, Democrat	Boulder.
County Surveyor	R. M. Cralle, Democrat	Boulder.
County Commissioners	W. M. Fergus	Whitehall.
	H. G. Smith	Basin.
	Edward Ryan	Boulder.
State Senator	D. G. Warner, Democrat	Boulder.
Members of House of Representatives..	John Berkin, Democrat	Boulder.
	Archibald R. McDonald, Democrat	Whitehall.
	Joseph B. Brien, Democrat	Basin.

The County Commissioners elected November 6th, 1900, who will take office on January 1st, 1902, are Edward Ryan, Democrat, Boulder; A. H. Moulton, Democrat, Jefferson City, and Wm. Fergus, Democrat, Whitehall.

Justices of the Peace: W. T. Sweet, Boulder; H. O. Johnson and D. A. Righenour, Basin; Wm. B. Redding, Clancy; David Miller, Woodville; Edwin Cooley, Whitehall.

LIST OF COUNTY OFFICIALS OF LEWIS AND CLARKE COUNTY.

Office.	Name and Politics.	Address.
District Judges	Henry C. Smith, Democrat	Helena.
	J. M. Clements, Populist	Helena.
Sheriff	Jefferson O'Connell, Democrat	Helena.
Treasurer	Wm. L. Steele, Democrat	Helena.
County Clerk and Recorder	Sidney Miller, Democrat	Helena.
County Assessor	Chas. H. Martien, Populist	Helena.
County Attorney	Odell W. McConnell, Democrat	Helena.
Clerk of District Court	Finlay McRae, Democrat	Helena.
Sup't. of Public Schools	Miss Ida Fullerton, Republican	Helena.
County Auditor	Daniel Sweeney, Democrat	Helena.
County Coroner	Dr. Ben C. Brooke, Democrat	Helena.
Public Administrator	B. H. Foley, Democrat	Helena.
County Surveyor	T. S. Hinsdale, Democrat	Helena.
County Commissioners	E. Beach	Helena.
	W. B. Hundley	Helena.
	John Larson	Helena.
State Senator	Wm. M. Biggs, Democrat	Helena.
Members of House of Representatives..	John Baker, Democrat	Helena.
	T. D. Sullivan, Democrat	Marysville.
	W. J. Hartwig, Democrat	Helena.
	J. H. Urquhart, Democrat	Helena.
	H. L. Cram, Democrat	Helena.
	F. S. Sanden, Populist	Helena.
	F. H. Donaldson, Democrat	East Helena.

County Commissioners elected November 6th, 1900, and who take office on January 1st, 1902, are W. O. Hutchinson, Democrat; W. B. Hundley, Democrat; F. J. Wegner, Democrat.

LIST OF COUNTY OFFICIALS OF MADISON COUNTY.

Office.	Name and Politics.	Address.
District Judge	M. H. Parker, Democrat	Boulder.
Sheriff	Jas. Summers, Democrat	Virginia City.
Treasurer	C. H. Buford, Democrat	Virginia City.
County Clerk and Recorder	H. E. Steffens, Republican	Virginia City.
County Assessor	A. B. Thurgood, Democrat	Virginia City.
Clerk of District Court	Jas. G. Walker, Democrat	Virginia City.
County Attorney	M. M. Duncan, Democrat	Virginia City.
Sup't. of Public Schools	Julia Donegan, Democrat	Virginia City.
County Coroner	T. J. Lowman, Democrat	Virginia City.
Public Administrator	S. V. Stewart, Democrat	Virginia City.
County Surveyor	Newton Orr, Democrat	Virginia City.
County Commissioners	Pat Carney, Democrat	Parrott.
	M. Elser	Sheridan.
	C. B. Varney	Ennis.
State Senator	W. A. Clark, Ind., Democrat	Virginia City.
Members of House of Representatives	B. J. Fine, Democrat	Virginia City.
	Geo. F. White, Democrat	Twin Bridges.
	Ell S. Adkins, Democrat	Pony.

County Commissioners elected November 6th, 1900, who take office January 1st, 1902, are O. B. Varney, Democrat, Ennis; E. D. Marsh, Republican, Sheridan, and R. N. Hawkins, Democrat, Norris.

Justices of the Peace: N. D. Johnson, Democrat, Virginia City; J. E. Dickey, Democrat, Rochester; W. R. Macfadden, Republican, Pony; Robt. Hedge, Democrat, Meadow Creek; Levi Shambow, Republican, Monida; W. A. Means, Republican, Sheridan.

LIST OF COUNTY OFFICIALS OF MEAGHER COUNTY.

Office.	Name and Politics.	Address.
District Judge	Wm. L. Holloway, Republican	Bozeman.
Sheriff	C. W. Hill, Republican	White Sulphur Springs.
Treasurer	Alex. Gibson, Republican	White Sulphur Springs.
County Clerk and Recorder	G. W. Harden, Republican	White Sulphur Springs.
Assessor	Charles H. Mayn, Republican	White Sulphur Springs.
Clerk of Court	B. W. Badger, Republican	White Sulphur Springs.
County Attorney	Max Waterman, Republican	White Sulphur Springs.
Sup't. of Public Schools	Miss Lottie A. Harris, Republican	White Sulphur Springs.
Coroner	E. K. Fitzgerald	(Dead.)
Public Administrator	James T. Wood, Republican	White Sulphur Springs.
County Surveyor	D. P. Mumbrue, Republican	Wolsey.
County Commissioners	John N. Harder, Democrat	Castle.
	John C. Tipton, Democrat	White Sulphur Springs.
	Geo. F. Danzer, Republican	White Sulphur Springs.
	Elmer J. Anderson, Republican	White Sulphur Springs.
State Senator	Nathan Godfrey, Republican	Two Dot.
Members of House of Representatives	Charles L. Murray, Republican	White Sulphur Springs.

The County Commissioners elected November 6th, 1900, and who will take office on January 1st, 1902, are M. T. Grande, Republican, Castle; Chas. B. Catlin, Republican, White Sulphur Springs, and Herbert Holloway, Republican, Oka.

Justices of the Peace: J. E. Lippen cott and E. G. Hartfield, White Sulphur Springs; J. S. Kelly and J. B. Whitson, Castle; Charles Palmer, Martinadale; Ernest C. Baxter, Two Dot.

LIST OF COUNTY OFFICIALS OF MISSOULA COUNTY.

Office.	Name and Politics.	Address.
District Judge	Frederick C. Webster, Republican ..	Missoula.
Sheriff	Clarence R. Prescott, Democrat ...	Missoula.
Treasurer	George C. Higgins, Democrat	Missoula.
County Clerk and Recorder	Herbert T. Wilkinson, Democrat ..	Missoula.
Assessor	John H. Massey, Democrat	Missoula.
Clerk of District Court	R. W. Kemp, Republican	Missoula.
County Attorney	Chas. H. Hall, Democrat	Missoula.
Sup't. of Public Schools	Kate Shelley, Democrat	Missoula.
Coroner	John Hayes, Democrat	Missoula.
Public Administrator	B. T. Nesmith, Democrat	Missoula.
County Surveyor	Wilbur Catlin, Republican	Missoula.
Auditor	James McGinniss, Democrat	Missoula.
County Commissioners	J. R. Latimer	Missoula.
	A. P. Tietjen	Missoula.
	W. B. Russell	Eddy.
State Senator	Tyler Worden, Republican	Missoula.
Members of House of Representatives ..	Wm. Crawford, Labor	Clinton.
	Thos. H. Pendergrass, Labor	Carlton.
	Ed Donlan, Republican	Frenchtown.
	J. M. Dixon, Republican	Missoula.

County Commissioners elected November 6th, 1900, and who will take office in November, 1901, are John Bonner, Democrat, Missoula; Peter Scheffer, Democrat, Missoula, and August Hollensteiner, Republican, Lo Lo.

Justices of the Peace: W. A. Hutchens and Wm. Hayes, Missoula; E. W. Wilson and Wm. Lutton, Thompson; John Meany and L. Brooks, Plains; T. H. Smith, Nixon; W. A. Belbe, Heron; E. Rodgers, St. Regis; Wm. Streeter, Superior; L. C. Sturman and Ed Harlesty, Lathrop.

LIST OF COUNTY OFFICIALS OF PARK COUNTY.

Office.	Name and Politics.	Address.
District Judge	Frank Henry, Republican	Livingston.
Sheriff	Frank Beley, Democrat	Livingston.
Treasurer	Geo. T. Chambers, Republican	Livingston.
County Clerk and Recorder	Chas. Angus, Republican	Livingston.
Assessor	Z. H. Daniels, Republican	Livingston.
Clerk of District Court	A. C. Davis, Jr., Republican	Livingston.
County Attorney	H. J. Miller, Silver Republican	Livingston.
Sup't. of Public Schools	Mrs. Nora Colvin, Democrat	Livingston.
Coroner	S. E. Leard, Republican	Livingston.
Public Administrator	Emanuel Cameron, Democrat	Livingston.
County Surveyor	S. H. Crookes, Republican	Livingston.
County Commissioners	R. B. Kelley	Livingston.
	N. Ebert	Livingston.
	L. H. Van Dyck	Horr.
State Senator	J. M. Conrow, Democrat	Livingston.
Members of House of Representatives ..	Benj. F. Myers, Democrat	Livingston.
	T. M. Swindlehurst, Democrat	Livingston.

County Commissioners elected November 6th, 1900, and who will take office January 1st, 1902, are N. Ebert, Democrat, Livingston; Albert Trager, Republican, Horr, and F. A. Krieger, Republican, Livingston.

Justices of the Peace: Frank Bender and Sam'l. Hasford, Livingston; M. M. Black, Fridley; J. H. Pisor, Horr; F. A. Pratt, Gardiner; Sam'l. T. Lipps, Jardine; D. Davis, Aldridge.

LIST OF COUNTY OFFICIALS OF RAVALLI COUNTY.

Office.	Name and Politics.	Address.
District Judge	Frederick C. Webster, Republican.....	Missoula.
Sheriff	James D. Watts, Republican	Hamilton
Treasurer	Charles H. Buck, Republican	Hamilton.
County Clerk and Recorder	Howard D. Smart, Republican	Hamilton.
Assessor	Charles M. Johnson, Republican	Hamilton.
Clerk of District Court	John F. Cone, Republican	Hamilton.
County Attorney	Wm. P. Baker, Republican	Hamilton.
Sup't. of Public Schools	Kitty Ostermeyer, Populist	Hamilton.
Coroner	Wm. D. Cunningham, Republican	Hamilton.
Administrator	Jackson D. Miser, Republican	Hamilton.
County Surveyor	Louis Lacroussier, Republican	Hamilton.
County Commissioners	E. A. Johnson	Victor.
	J. R. Rawlins	Hamilton.
	W. E. Gleason	Florence.
State Senator	H. L. Myers, Ind., Democrat	
Members of House of Representatives..	George T. Baggs, Republican	Stevensville
	Aaron Conner, Republican	Darby.

No County Commissioners elected this year.

Justices of the Peace: J. B. Overtierf, Darby; A. H. Bradley, Grantsdale; Frank J. Morris, Hamilton; Naoman Johnsen, Cornvallis; S. Sedgwick, Stevensville; Henry Chambers, Grantsdale; Geo. W. Solleder, Darby; Van R. Woodmancy, Victor.

LIST OF COUNTY OFFICIALS OF SWEET GRASS COUNTY.

Office.	Name and Politics.	Address.
District Judge	Frank Henry, Republican	Big Timber.
Sheriff	Oscar Fallang, Republican	Big Timber.
Treasurer	J. W. Geiger, Republican	Big Timber.
County Clerk and Recorder	J. H. Moore, Republican	Big Timber.
County Assessor	C. O. Hathaway, Republican	Big Timber.
Clerk of District Court	Ben M. Mjelde, Democrat	Big Timber.
County Attorney	E. M. Hall, Republican	Big Timber.
Sup't. of Public Schools	Stella Walker, Democrat	Big Timber.
Public Administrator	A. G. Yule, Republican	Big Timber.
County Surveyor	D. J. Walvoord, Republican	Big Timber.
County Commissioners	J. W. Balley	Big Timber.
	R. J. McConnell	McLeod.
	Thos. Flanagan	Absarokee.
State Senator	J. N. Kelly, Republican	Hunter's Hot Springs.
Member of House of Representatives...	R. Brownlee, Republican	Melville.

County Commissioners elected November 6th, 1900, and who will take office on the 1st of January, 1902, are Francis Ervin, Republican; O. B. Nevin, Republican, and R. J. McConnell, Republican, all of Big Timber.

No Coroner elected.

Justices of the Peace: H. C. Pound and J. J. Cameron, Big Timber; E. H. Ellington and W. G. Strong, Melville; J. M. Lyons, Nye; B. B. Miles, McLeod.

LIST OF COUNTY OFFICIALS OF SILVER BOW COUNTY.

Office.	Name and Politics.	Address.
District Judges	Wm. Clancy, Populist	Butte.
	Edw. W. Harney, Democrat	Butte.
Sheriff	James B. Furey, Labor	Butte.
Treasurer	James Maher, Labor	Butte.
County Clerk and Recorder	John Weston, Populist	Butte.
Assessor	Dan Brown, Populist	Butte.
Clerk of District Court	Samuel M. Roberts, Democrat	Butte.
County Attorney	Peter Breen, Populist	Butte.
Sup't. of Public Schools	Mary Mullins, Democrat	Butte.
Auditor	Alvin A. Crossman, Democrat	Butte.
Coroner	Sam P. Johnson, Labor	Butte.
Public Administrator	Jos. P. Collins, Democrat	Butte.
County Surveyor	Andrew F. Monroe, Democrat	Butte.
County Commissioners	Wm. D. Clark, Populist	Butte.
	Chas. G. Ferrell, Democrat	Butte.
	Ed. Mathews, Populist	Butte.
State Senator	Thomas F. Courtney	Butte.
Members of House of Representatives..	Frank E. Corbett, Democrat	Butte.
	Morgan P. Gilchrist, Democrat	Butte.
	Thos. S. Kilgallon, Democrat	Butte.
	John MacGinnis, Democrat	Butte.
	Joseph J. Meunier, Democrat	Butte.
	Barney Ferry, Populist	Butte.
	Frank J. Pelletier, Labor	Butte.
	Frank B. Axtell, Labor	Butte.
	Martin Dee, Jr., Labor	Butte.
	John J. Quinn, Labor	Butte.
	Charles Lannin, Labor	Butte.
	Patrick G. Sullivan, Populist	Butte.

The County Commissioners elected November 6th, 1900, who will take office on the 8th day of November, 1901, are Michael P. Haggerty, Labor; Wm. D. Clark, Populist, and Patrick Peoples, Populist, all of Butte.

Justices of the Peace—Silver Bow Township: John Nelson and William H. Arnold, Butte. South Butte Township: Cornelius Taylor and John Olson, Butte. Walkerville Township: Thomas Neenan and James H. Hall, Walkerville. Meaderville Township: Hiram S. Libby and Peter J. McDonald, Meaderville. Red Mountain Township: Wm. Maloney and John Moa, Melrose. German Gulch Township: Milo French and W. H. Calvert, German Gulch.

LIST OF OFFICIALS OF TETON COUNTY.

Office.	Name and Politics.	Address.
District Judge	D. F. Smith, Democrat	Kallispell.
Sheriff	Geo. C. Taylor, Republican	Dupuyer.
Treasurer	John S. Gordon, Republican	Choteau.
County Clerk and Recorder	A. C. Warner, Republican	Choteau.
Assessor	Thos. O. Larson, Republican	Choteau.
Clerk of District Court	Sterling McDonald Republican	Choteau.
County Attorney	James Sulgrove, Republican	Choteau.
Sup't. of Public Schools	Fannie E. Chenowith, Republican	Choteau.
Coroner	Wm. H. Titus, Republican	Dupuyer.
Public Administrator	James H. Dunlap, Republican	Choteau.
County Surveyor	Walter Mathews, Democrat	Pondera.
County Commissioners	Wm. M. Foster	Choteau.
	C. B. Perkins	Dupuyer.
	M. Connolly	Shelby.
State Senator	Samuel L. Mitchell	Choteau.
Member of House of Representatives...	W. D. Jones, Republican	Dupuyer.

Justices of the Peace: Charles W. Cooper, Charles Parker, Marion Gleason, Thomas Cowan, William Dawes, J. M. Wilcox, Thomas E. Williamson.

LIST OF OFFICIALS OF VALLEY COUNTY.

Office.	Name and Politics.	Address.
District Judge	Edwin K. Cheadle, Republican	Lewistown.
Sheriff	W. S. Griffith, Republican	Glasgow.
Treasurer	S. C. Small, Democrat	Glasgow.
County Clerk and Recorder	R. J. Crosset, Republican	Glasgow.
County Assessor	H. G. Robinson, Republican	Malta.
Clerk of District Court	John Survant, Independent	Malta.
County Attorney	John J. Kerr, Republican	Glasgow.
Sup't. of Public Schools	Carrie E. Luther Republican	Glasgow.
County Coroner	Warren O. Robbins, Republican	Glasgow.
Public Administrator	J. W. Williams, Democrat	Culbertson.
County Surveyor	Truman M. Patten, Republican	Glasgow.
County Commissioners	D. C. Kyle	Saco.
	S. P. Mitchell	Culbertson.
	H. Cosner	Malta.
State Senator	A. W. Mahon, Democrat	Glasgow.
Member of House of Representatives...	Walter Shanley, Republican	Glasgow.

Justices of the Peace: James Wilson, Andrew Davidson, Malta; W. L. Vasha, J. B. Northrup, Saco; S. Blanchard, R. H. Friedl, Glasgow; Wm. Stephens, Wm. Jackson, Culbertson

LIST OF OFFICIALS OF YELLOWSTONE COUNTY.

Office.	Name and Politics.	Address.
District Judge	C. H. Loud, Republican	Miles City.
Sheriff	George W. Hubbard, Democrat	Billings.
Treasurer	Eugene S. Holmes, Republican	Billings.
County Clerk and Recorder	Nat G. Carwile, Democrat	Billings.
County Assessor	A. P. Smith, Republican	Billings.
Clerk of District Court	T. A. Williams, Democrat	Billings.
County Attorney	Fred H. Hathhorn, Republican	Billings.
Sup't. of Public Schools	Marguerite M. Strang, Republican	Billings.
County Coroner	James Chapple, Republican	Billings.
Public Administrator	Henry Terrell, Democrat	Billings.
County Surveyor	A. A. Morris, Republican	Billings.
County Commissioners	T. S. Linton, Republican	Billings.
	J. B. Annin, Republican	Columbus.
	Pat Lavelle, Democrat	Columbus.
State Senator	C. O. Gruwell, Democrat	Billings.
Member of House of Representatives	Geo. C. Stull, Republican	Billings.

The County Commissioners elected November 6th, 1900, are C. M. Jacobs, Democrat, Musselshell; W. O. Parker, Republican, Billings, and E. K. Deverill, Republican, Park City.

Justices of the Peace: Alex Fraser and F. L. Mann, Billings; W. L. G. Unger, Laurel; Z. B. Brown, Park City; Ged. H. Simpson, Columbus.

The Adulteration of Food In Montana.

[F. W. Traphagen, Irvin Cockrill and Edmund Burk.]

About two years ago, with the financial assistance of Commissioner J. H. Calderhead, of the Bureau of Agriculture, Labor and Industry, a number of samples of baking powder, vinegar, sugar and kerosene oil were collected. These were analyzed in the laboratory of the Montana Agricultural Experiment Station, and the results published in the annual report of the Commissioner of Agriculture, Labor and Industry.

This work proved of such interest that it was decided to enlarge the scope of the investigation, and include many of the canned goods, cereal breakfast foods and other articles in daily use on our tables. The purpose of this study is to so impress the citizens of our commonwealth with a knowledge of the existing conditions, that a law, providing adequate protection, may be passed by our next Legislature. It is true that we have laws dealing with the adulteration of food, but no proper provision is made for their enforcement.

The accompanying tables show that unless a rigid inspection is provided for, we are at the mercy of the wholesaler. At the Pure Food Congress, held in Washington in March of this year, the almost unanimous opinion of the delegates was in favor of a proper labeling of all articles of food and drink. Very few were in favor of prohibiting the use of preservatives, of artificial coloring matters, of the mixture of cheaper materials. It was felt that if by means of a label, a purchaser was able to know exactly what he was buying, he would soon come to use the better class of goods.

The congress almost unanimously endorsed the Brosius pure food bill, a copy of which accompanies this report. Of course it is to be understood that this bill only deals with the interstate commerce in such articles, yet its passage would greatly improve the character of the food on sale in our state. The passage of such a bill would leave much to be done still in properly administering a law for our immediate protection. It is to be hoped that our Legislature will petition Congress for the passage of the Brosius bill. This bill has already been favorably reported by the House committee having it in charge, and its counterpart has received equally favorable treatment by the Committee on Manufactures of the Senate.

The passage of such a bill by Congress means more to us in Montana than perhaps to the people of any other state.

First Session.
Fifty-sixth Congress, { H. R. 9677.

IN THE HOUSE OF REPRESENTATIVES.

March 16, 1900.

Mr. Brosius introduced the following bill, which was referred to the Committee on Interstate and Foreign Commerce, and ordered to be printed:

A BILL.

For preventing the adulteration, misbranding and imitation of foods, beverages, candies, drugs and condiments in the District of Columbia and the territories, and for regulating interstate traffic therein, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America, in Congress assembled, that for the purpose of protecting the commerce in food products and drugs between the several states and in the District of Columbia and the territories of the United States and foreign countries, the Secretary of Agriculture shall organize the Chemical Division of the Department of Agriculture into a bureau of chemistry, which shall have the direction of the chemical work of the other executive departments, whose respective heads may apply to the Secretary of Agriculture for such collaboration, and which shall also be charged with the inspection of food and drug products, as hereinafter provided in this act. The Secretary of Agriculture shall make necessary rules and regulations for carrying out the provisions of this act, under which the Director of the Bureau of Chemistry shall procure, from time to time, or cause to be procured, and analyze or cause to be analyzed or examined, chemically, microscopically, or otherwise, samples of foods and drugs offered for sale in the original unbroken packages in the District of Columbia, in any territory, or in any other state other than that in which they shall have been respectively manufactured or produced, or from a foreign country, or intended for export to foreign country. The Secretary of Agriculture is hereby authorized to employ such chemists, inspectors, clerks, laborers and other employes as may be necessary to carry out the provisions of this act, and to make such publication of the results of examinations and analyses as he may deem proper.

Section 2. That the introduction into any state or territory or the District of Columbia from any other state or territory or the District of Columbia, or from any foreign country, or shipment to any foreign country of any article of food or drugs which is adulterated or misbranded within the meaning of this act is hereby prohibited, and any person who shall ship or deliver for shipment from any other state or territory or the District of Columbia, or to a foreign country, or who shall receive in any state or territory or the District of Columbia or foreign country, or who, having received, shall deliver, or offer to deliver, in the original unbroken packages, for pay or otherwise, or offer to deliver to any other person, any such article so adulterated or misbranded within the meaning of this act, or any person who shall sell or offer for sale in the District of Columbia or in any territory of the United States such adulterated, mixed, misbranded, or imitated food or drugs, or export or offer to export the same to any foreign country, shall be guilty of a misdemeanor, and for such offense shall be fined not exceeding two hundred dollars for the first offense, and for each subsequent offense not exceeding three hundred dollars, or to be imprisoned not exceeding one year, or both, in the discretion of the court.

Section 3. That the Director of the Bureau of Chemistry shall make, or cause to be made, under the rules and regulations prescribed by the Secretary of Agriculture, examinations of specimens of foods and drugs offered for sale in the original unbroken packages in the District of Columbia, in any territory, or in any state other than which they shall have been respectively manufactured or produced, or from any foreign country, or intended for shipment to any foreign country, which may be collected from time to time in various parts of the country. If it shall appear from such examination that any of the provisions of this act have been violated the Secretary of Agriculture shall at once certify the facts to the proper United States District Attorney, with a copy of the results of the analysis, duly authenticated by the analyst under oath.

Section 4. That it shall be the duty of every district attorney to whom the Secretary of Agriculture shall report any violation of this act to cause proceedings to be commenced and prosecuted without delay for the fines and penalties in such case provided.

Definitions.

Section 5. That the term "drug," as used in this act, shall include all medicines

and preparations recognized in the United States Pharmacopoeia for internal or external use. The term "food," as used herein, shall include all articles used for food, drink, confectionery or condiment, by man or domestic animals, whether simple, mixed or compound. The term "misbranded," as used herein, shall apply to all drugs or articles of food, or articles which enter into the composition of food, the package or label of which shall bear any statement which shall be false or misleading in any particular, and to any food or drug product which is falsely branded as to the state, territory or country in which it is manufactured or produced.

Adulterations.

Section 6. That for the purpose of this act an article shall be deemed to be adulterated—

In the case of drugs:

First. If, when a drug is sold under a name recognized in the United States Pharmacopoeia, it differs from the standard of strength, quality or purity, as determined by the tests laid down in the United States Pharmacopoeia, official at the time of investigation.

Second. If its strength or purity fall below the professed standard under which it is sold.

Third. If it be an imitation of, or offered for sale under the name of another article.

In the case of confectionery:

If it contain terra alba, barytes, talc, chrome yellow, or other mineral substances, or poisonous colors or flavors, or other ingredients deleterious or detrimental to health.

In the case of food:

First. If any substance or substances has or have been mixed and packed with it so as to reduce or lower or injuriously affect its quality or strength, so that the product, when offered for sale, shall deceive or tend to deceive the purchaser.

Second. If any substance or substances has or have been substituted wholly or in part for the article, so that the product, when sold, shall deceive or tend to deceive the purchaser.

Third. If any valuable constituent of the article has been wholly or in part abstracted, so that the product, when sold, shall deceive or tend to deceive the purchaser.

Fourth. If it be an imitation of, or offered for sale under the specific name of another article.

Fifth. If it be mixed, colored, powdered or stained in a manner whereby damage or inferiority is concealed, so that such product, when sold, shall deceive or tend to deceive the purchaser.

Sixth. If it contain any added poisonous ingredient or any ingredient which may render such article injurious to the health of the person consuming it.

Seventh. If it be labeled or branded so as to deceive or mislead the purchaser, or purport to be a foreign product when not so, or is an imitation, either in package or label, of another substance of a previously established name, or which has been trade-marked or patented.

Eighth. If it consists of the whole or in any part of a diseased, filthy, decomposed or putrid animal or vegetable substance, or any portion of an animal unfit for food, whether manufactured or not, or if it is the product of a diseased animal, or one that has died otherwise than by slaughter:

Provided: That an article of food which does not contain any added poisonous or deleterious ingredient shall not be deemed adulterated in the following cases:

First. In the case of mixtures or compounds which may be now, or from time to time hereafter known as articles of food, under their own distinctive names, and not included in definition fourth of this section.

Second. In the case of articles labeled, branded or tagged so as to plainly indicate that they are mixtures, compounds, combinations, imitations, or blends: Provided, That the name shall be labeled, branded or tagged, as prescribed by the Secretary of Agriculture, so as to show the exact character thereof. And provided further, That nothing in this act shall be construed as requiring or compelling proprietors or manufacturers of proprietary foods which contain no unwholesome added ingredient to disclose their trade formulas, except in so far as the provisions of this act may require to secure freedom from adulteration or imitation: Provided further, That no dealer shall be convicted under the provisions of this act when he is able to prove a written guaranty of purity, in a form approved by the Secretary of Agriculture, as published in his rules and regulations, signed by the manufacturer, or the party or parties from whom he purchased said articles: Provided also, That said guarantor or guarantors reside in the United States. Said guaranty shall contain the full name and address of the party or parties making the sale to the dealer, and the said party or parties shall

be amenable to the prosecution, fines and other penalties which would attach in due course to the dealer under the provisions of this act.

Section 7. That it shall be the duty of the Secretary of Agriculture to fix standards of food products when advisable, and to determine the wholesomeness or unwholesomeness of preservatives and other substances which are or may be added to foods, and to aid him in reaching just decision in such matters he is authorized to call upon the Director of the Bureau of Chemistry and the chairman of the committee on food standards of the Association of Official Agricultural Chemists, and such physicians, not less than five, as the President of the United States shall elect, three of whom shall be from the Medical Department of the Army, the Navy and the Marine Hospital Service, and not less than five experts, to be selected by the Secretary of Agriculture, by reason of their attainments in physiological chemistry, hygiene, commerce and manufacture, to consider jointly the standards of all food products (within the meaning of this act), and to study the effect of preservatives and other substances added to food products on the health of the consumer; and when so determined and approved by the Secretary of Agriculture such standards shall guide the chemists of the Department of Agriculture in the performance of the duties imposed upon them by this act, and shall remain the standard before all United States Courts. It shall be the duty of the Secretary of Agriculture, either directly or through the Director of the Bureau of Chemistry and the chairman of the committee on food standards of the Association of Official Agricultural Chemists and the medical officers and experts before mentioned, to confer with and consult, when so requested, the duly accredited representatives of all industries producing articles for which standards shall be established under the provisions of this act.

Section 8. That every person who manufactures or produces for shipment and delivers for transportation within the District of Columbia or any territories, or who manufactures or produces for shipment or delivers for transportation from any state, territory, or District of Columbia, or to any foreign country, any drug or article of food, and every person who exposes for sale or delivers to a purchaser in the District of Columbia or in any territory any drug or any article of food manufactured or produced within said District of Columbia or said territory, or who exposes for sale or delivers for shipment any drug or article of food received from a state, territory, or said District of Columbia other than the state, territory or the District of Columbia in which he exposes for sale or delivers such drug or article of food, or from any foreign country, shall furnish within business hours, and upon tender and full payment of selling price, a sample of such drug or articles of food to any person duly authorized by the Secretary of Agriculture to receive the same, and who shall apply to such manufacturer, producer, or vender, or person delivering to a purchaser such drug or article of food for such sample for such use, in sufficient quantity for the analysis of any such article or articles in his possession. In the presence of such dealer and an agent of the Department of Agriculture, if so desired by either party, said sample shall be divided into three parts, and each part shall be sealed by the seal of the Department of Agriculture. One part shall be left with the dealer, one delivered to the Director of the Bureau of Chemistry of the Department of Agriculture, and one deposited with the United States District Attorney for the district in which the sample is taken. Said manufacturer, producer or dealer, may have the sample left with him analyzed at his own expense, and if the results of said analysis differ from those of the Department of Agriculture, the sample in the hands of the District Attorney may be analyzed by a third chemist, who shall be appointed by the President of the Association of Official Agricultural Chemists of the United States, and the analysis shall be conducted, if so desired, in the presence of a chemist of the Department of Agriculture and a chemist representing the dealer, and the whole data obtained shall be laid before the Court.

Section 9. That any manufacturer, producer or dealer who refuses to comply, upon demand, with the requirements of Section 8 of this act shall be guilty of a misdemeanor; and upon conviction shall be fined not exceeding one hundred dollars, or imprisoned not exceeding one hundred days, or both. And any person found guilty of manufacturing, or offering for sale, or selling an adulterated, impure, or misbranded article of food or drug in violation of the provisions of this act shall be adjudged to pay, in addition to the penalties herebefore provided for, all the necessary costs and expenses incurred in inspecting and analyzing such adulterated articles which said person may have been found guilty of manufacturing, selling, or offering for sale.

Section 10. That this act shall not be construed to interfere with commerce wholly internal in any state, nor with the exercise of their police powers by the several states.

Section 11. That any article of food or drug that is adulterated or misbranded, within the meaning of this act, and is transported from one state to another for sale, or if it be sold or offered for sale in the District of Columbia and the territories of the

United States, or if it be imported from a foreign country for sale, or if intended for export to a foreign country, shall be liable to be proceeded against in any District Court of the United States, within the district where the same is found and seized for confiscation, by a process of libel for condemnation. And if such article is condemned as being adulterated the same shall be disposed of as the said Court may direct, and if the proceeds thereof, if sold, less the legal costs and charges, shall be paid into the Treasury of the United States; but such goods shall not be sold in any state contrary to the laws of that state. The proceedings in such libel cases shall conform, as near as may be, to proceedings in admiralty, except that either party may demand trial by jury of any issue of fact joined in such case; and all such proceedings shall be at the suit of and in the name of the United States.

COPY OF ALL MONTANA LEGISLATION BEARING UPON THE ADULTERATION OF FOOD, AND KINDRED SUBJECTS.

Senate Bill No. 42.

An act to amend Section 702 of the Title X of the Penal Code of the State of Montana, relating to the adulteration of candy.

Be it enacted by the Legislative Assembly of the State of Montana:

Section 1. That Section 702 of Title X of the Penal Code of the State of Montana, of an act concerning crimes against the public health and safety, approved March, 15, 1895, be, and the same is hereby amended to read as follows:

Section 702. Every person who shall, by himself, his servant or agent, or as the servant or agent of any other person or corporation, manufacture for sale, or knowingly sell or offer to sell any candy adulterated by the mixture of terra alba, barytes, talc or any mineral substance, by poisonous colors or flavors or any other ingredients deleterious or detrimental to health, is guilty of a misdemeanor.

Section 2. This act shall be in force and effect from and after its passage and approval by the Governor.

Section 3. All acts and parts of acts in conflict herewith are hereby repealed.

Approved February 22, 1899.

KEROSENE AND COAL OIL.

Chapter XXI., Title VII., Part III., of the Political Code.

Section 3380. No person must sell, offer for sale, or have in his possession for sale within this state, any kerosene or coal oil, or any of the products thereof, which, from being adulterated, or from any cause will, at the temperature of one hundred and ten degrees, Fahrenheit's thermometer, emit an explosive vapor or gas, or is deficient in quality for illuminating purposes.

The state sealer of weights and measures, or any county sealer, may order a test to be made of any such oil in the possession of any person dealing therein, or offering the same for sale, and the expense thereof must be paid by the person offering it for sale.

Section 3381. The quantity used for such test must be not less than one-half pint. The provisions of this chapter do not prevent the use of gas or vapor of oils for illuminating purposes, when the oils from which such gas or vapor is generated, is contained in reservoirs outside of the building illuminated by such gas.

Section 3382. Every person who violates the provisions of this chapter is punishable as provided in Section 719 of the Penal Code.

Penal Codes, Title X., Section 719.

Every person who violates any of the provisions of Chapter XXI., Title VII., Part III., of the Criminal Code, relating to the sale of kerosene and coal oil, is guilty of a misdemeanor.

Section 682. Every person who adulterates any article of food, drink, drug, medicine, spirituous or malt liquor, or wine, or any article used in compounding them, with a fraudulent intent, to offer the same or cause or permit it to be offered for sale as unadulterated or undiluted, and every person who fraudulently sells, or offers for sale, the same as unadulterated or undiluted, is guilty of a misdemeanor.

Section 683. Every person who sells, or exposes for sale, or otherwise disposes of any article of food, drug, drink, or medicine, knowing that the same has become tainted, decayed, spoiled or otherwise unwholesome, or unfit to be eaten or drunk, with intent to permit same to be eaten or drunk, is guilty of a misdemeanor.

Section 684. Every person who manufactures for sale, or offers or exposes for sale, or has in his possession, with intent to sell any article or substance in resemblance of butter or cheese, not a legitimate product of the dairy, and not made exclu-

sively from milk or cream, or into which the oil or fat of animals, not produced from milk, has been introduced to take the place of cream; must distinctly stamp, brand or mark in some conspicuous place upon every firkin, tub, or package of any such article or substance in plain letters not less than one-fourth inch square, the word "Oleomargarine," or the words "Imitation Cheese," as the case may be; and in retail sale of such article or substance, in parcels or otherwise, the seller must deliver to the purchaser therewith, a printed label, bearing the plainly printed word or words, "Oleomargarine" or "Imitation Cheese," plainly marked as aforesaid.

Section 685. Every person dealing in articles or substances described in the next preceding section, and every hotel, restaurant, or boarding-house keeper using such article or substance in his business, must continuously and conspicuously keep posted up in not less than three exposed positions, in and about his place of business, a printed notice in the following words: "'Oleomargarine' or 'Imitation Cheese' sold (or used) here," which notice must be plainly printed with letters not less than two inches square each, and must, upon furnishing the article or substance to his customers or guests, if inquiry is made, distinctly inform each of them that the article furnished is not butter or cheese, the genuine product of the dairy, but is oleomargarine or imitation cheese.

FLOUR AND CEREAL BREAKFAST FOODS.

Our market is filled with cereal breakfast foods of all sorts, for which the most extravagant claims are made. They are put up in fancy packages, and are extensively advertised, all of which, of course, is paid for by the consumer. So far as the chemical composition of the food is concerned they offer little, if any, more than is found in our own locally produced cereal foods. Indeed, it will be found that Montana cereals can be made to produce foods superior to any produced by outside manufacturers. The consumption of these foods in our state is immense, and the market should be held for the benefit of our farmers and millers.

At the same time the consumer would be equally benefited, for instead of having his breakfast food consisting largely of starch, he would get a large proportion of glutinous matter, which is the most valuable food constituent of grain, for of this constituent Montana grain contains an amount which places it in the van.

In this connection it might be well to discuss briefly the points which determine the nutritive value of food. Food taken into the body may perform one or more of three very important functions: First, it may be used to keep the temperature of the body up to its normal point, which is thirty degrees or more above the surrounding atmosphere. Second, it may be used to supply the energy of the working body, just as coal supplies the energy through steam to the locomotive. Third, the most important function of the food is the building of muscular tissue and repairing of waste. For this last purpose the most expensive materials must be used, types of which are the lean of meat, the gluten of grain and the albuminoids of beans. On this account the value of flours and breakfast foods depends largely upon the amount of this albuminoid or proteid material present.

In addition the bread making value of flour is closely related to the percentage of gluten contained, for this gluten holds the starch grains together, and also prevents the escape of the gas produced by yeast or baking powder, thus producing a light spongy bread. The reason that good bread cannot be made from low-grade flour is chiefly because of the absence of this tenacious and at the same time highly nutritious gluten.

While the value of flours is so closely related to the content of the gluten, the percentage of the other constituents, however, does, falling in percentage as the gluten rises, and *vica versa*, rising as the gluten falls. So without ~~erence~~ to the mechanical preparation of the flour, the value depends very closely upon the percentage of gluten contained.

A further point of superiority that may be confidently looked for in Montana cereal products is the absolute freedom from adulteration. For, if for no other reason, it will not pay our millers to adulterate their product. A very common adulterant of flour in the east is corn meal, which can be supplied very much more cheaply than pure wheat flour, and which is mixed in varying proportions with wheat flour and sold as flour. This is simply a fraud on the pocketbook, and has been prevented to a great degree, but a very different fraud consists in mixing "mineraline" with flour. In connection with these two forms of adulteration let me quote from Dr. R. C. Kedzie of the Michigan Agricultural College.

The Fraud of Selling Mixed for Pure Flour.

"Not only is such mixed flour inferior in quality, but it sold as pure wheat flour. No mark on barrel or bag gives any intimation that a foreign and inferior article has been added. Instead of honest marking and branding, some high-sounding and catching name is affixed to commend it to the public. Some of the southern millers are singularly most modest about revealing the mixed composition of their super-excellent flour. One miller, in writing about his blended flour, stating privately the amount of adulterant used, closed by saying: 'We, of course, should prefer that our name should not appear publicly in connection with this matter, for reasons which are perfectly obvious to you.' Perfectly obvious!

The Tawney Bill.

"The millers have been seeking legislation by Congress to compel publicity in manufacturing and vending such adulterated products, and at last victory has perched upon their banner, the Tawney bill having become part of the revenue bill for carrying on the war with Spain. Honest millers are honestly happy over this victory. The manipulator must unmask his battery by taking out a license, paying \$12 yearly for the same, must distinctly brand every package of flour, and place a stamp of 4 cents per barrel on such mixed goods. The license and the stamps will bear a very small part of the expense of a great war, but the Tawney act 'puts the mark of Cain' upon the sly cheat and will go far towards securing honorable dealing in the flour trade. It removes the grounds for hostile orders in council in European governments for exclusion of adulterated goods. It will save the honest miller the money value of all the war taxes he will have to pay. This war hits more rascals than those in Spain and her colonies.

Mineraline.

"Solomon says that 'God made man upright, but he has sought out many inventions.' To show how far man may depart from uprightness, I need only mention the 'invention' of 'mineraline.' What is mineraline? Listen to their circular, bearing the date of May 7, 1898, from Greensboro, N. C.:

"Gentlemen: We invite your attention to our mineraline, which is without

a doubt the greatest existing discovery. There is no flour mill man who can afford not to use it for several reasons. Your flour will be much whiter and nicer; it does not injure the flour in any way; is not at all injurious to health, and by using mineraline you realize a margin of from \$400 to \$1,600 on each carload you use. To secure a low freight rate we mark it as 'ship stuff.' We can furnish you mineraline f. o. b., care your station, for high-grade flour at \$20 per ton; for medium grade flour, at \$16 per ton, and for bread meal at \$12 per ton, and for feed meal at \$8 per ton. For high-grade flour use 15 per cent. mineraline, and for feed meal use 18 per cent. mineraline. We furnish all our customers with a mixer free of charge. This machine will distribute completely any proportion desired, and costs nothing to attach. All you have to do is to bore a hole in your elevator pipe, clamp on the machine, attach a cord to run it, fill up the hopper, and set the feed to the proportion desired. Enclosed find samples of mineraline for medium grade flour. You cannot afford to let your competitor beat you in both quality and margin. We would be glad to hear from you.

"Very truly yours,

THE YORK MANUFACTURING CO.

"What is mineraline? Nothing but ground rock. Not a particle of food material or any substance than any animal can digest. It is mainly the common rock known as feldspar, a hard stone, which by weathering and decomposition forms clay. It is almost insoluble in the strongest acids, and is as far as possible removed from the realm of life. The addition of it to flour is simply a material of no value whatever in the flour, and which may greatly impair digestion and derange vital functions of animal nutrition. It is an unmitigated cheat, and the miller who mixes it with his flour has struck the bed-rock of rascality. At first sight it would seem that no person who knew enough to grind wheat flour would ever be so foolish as to mix dirt with flour. Yet there is always somebody who is ready to catch at a cheat that promises cash. I have just received a letter from an intelligent gentleman in Greensboro, N. C., the head center of this fraud. Here is his letter:

Greensboro, N. C., June 13, 1898.

My Dear Dr. Kenzie: I have always admired your stand for pure flour. Enclosed please find a kind of rock mined around Greensboro. One man here is now engaged in grinding and bolting this stuff. He has one order for 150 tons of it by a firm in Tennessee. He also sends carlots of it to some north-eastern cities for some purpose. I am told that the Eastern Tennessee man's order is for mixture with wheat flour. Yours truly,

"'Eternal vigilance is the price of liberty,' and the price of pure food is the same.

"The time at our disposal has not yet permitted of an investigation of the possible adulteration of the various brands of flour on sale within the state, but there is no good reason to believe that any of the cereals are adulterated. While this is true, it is equally true also that most extravagant claims are made concerning the digestibility, readiness for cooking and food value of many of these prepared foods.

"Some brands sold as anti-diabetic foods contain as much starch as ordinary unprepared goods, and are much more harmful, because in fancied se-

curity an invalid will see no reason for caution in the use of an article such as this is advertised to be. The following quotation from the fifteenth annual report of the Maine Agricultural Experiment Station bears upon this point:

"'Cream of wheat claims to be composed almost entirely of pure gluten, is one of the healthiest and most nutritious foods known.' It claims to be 'made from the very choicest of selected hard spring wheat, and being almost pure gluten, is highly recommended for the use of diabetic persons.' The claim that Cream of Wheat is 'almost pure gluten is false and should be criminal. Diabetic persons should avoid starch and sugar. As a food for people in health, Cream of Wheat is all right. This preparation contains 75 per cent. of these carbohydrates.'

"Many breakfast foods are advertised as being so prepared that only a few minutes cooking, from two minutes upward, depending upon the brand, is necessary. In no case was it found possible to prepare the food in the extremely short times mentioned. Of course, in the mechanical conditions in which these foods are placed upon the market some diminution of the time necessary for cooking is possible, but not nearly so much as the advertisements would lead the purchaser to believe.

"Another point which illustrates the remark made earlier in this report that the consumer pays dearly for the fine packages in which he obtains his breakfast foods is fully substantiated by an experience in Maine.

"'The American Cereal Company put their goods up under at least three names and in four forms. Quaker Oats are sold in package, Buckeye Oats in package and in barrel, and the American Cereal Company's Oats in bulk. The only apparent difference in the four kinds is the price. The Buckeye Oats in bulk retailed at Bangor at 3½ cents per pound, the American Cereal Company's Rolled Oats in bulk at 4 cents. The Buckeye Oats cost in Bangor 5.3 cents, and the Quaker Oats, 6.9 cents a pound. They are all good quality rolled oats, and there seems to be no reason why one should pay 6.9 cents a pound, when apparently just as good goods, made by the same company, sell for less than half that price. All of the rolled oats are good goods, from a chemical standpoint, and there are no greater differences in composition than one would expect. The different companies differ no more than different samples from the same companies would.'

"If our millers would place on the market a good quality of rolled oats made from Montana oats, the sales ought to be very large, for there is no reason why with such raw materials as they have to use, they should not manufacture a product hard to excel. The Maine report quoted before contains such an elegant expose of the ridiculous claims of the manufacturers of the so-called 'Grape Nuts' that it seemed best to reproduce it here.

"'Grape Nuts, made by the Postum Cereal Company, is made by special treatment of entire wheat and barley.' These goods have nearly the same approximate composition as the wheat foods. Part of the starch has been changed into dextrine and grape sugar. The claims of the makers are preposterous. Grape Nuts 'are a condensed food.' 'Four heaping teaspoons of Grape Nuts are sufficient for the average meal.' 'The system will also absorb a greater amount of nourishment from one pound of Grape Nuts than from ten pounds of meat, wheat, oats or bread.' A man at moderate work needs

per day about .28 pounds of protein and sufficient fats and carbohydrates in addition to make the potential energy of the day's food 3,500 calories. Four heaping teaspoonfuls of Grape Nuts weigh about one ounce. The protein and energy needed for one meal (1-3 of one day) and that furnished by four heaping teaspoonfuls of Grape Nuts are compared in the following table:

	Protein Pounds.	Fuel Value Calories.
Needed for 1-3 day by man at moderate work.....	.090	1,175
Furnished by four heaping teaspoonfuls (1 oz.) of Grape Nuts.....	.007	117

It would require .77 pounds of Grape Nuts ($\frac{3}{4}$ of a package) to furnish 1-3 of the protein needed for one meal for a man at moderate work; the energy needed would be afforded by .63 pounds.

The nutrients of beef are more completely digested and absorbed than those of vegetable foods. There is no reason for thinking that Grape Nuts would be more completely digested than rolled oats, wheat flour or bread. About 85 per cent. of the protein and of fuel value of vegetable foods are digested and rendered available to the body. In the following table there are compared the pounds of protein and fuel values of one pound of Grape Nuts with 'ten pounds of meat, wheat, oats or bread.'

Pounds of protein and fuel value of one pound of Grape Nuts compared with ten pounds of beef, rolled wheat, wheat flour, rolled oats and bread.

	Protein Pounds.	Fuel Value Calories.
1 pound of Grape Nuts	.12	1,870
10 pounds round steak, including bone.....	1.90	8,950
10 pounds beef rump, including bone	1.29	14,050
10 pounds rolled wheat	1.01	17,650
10 pounds bread flour	1.31	16,450
10 pounds rolled oats	1.50	19,650
10 pounds white bread	.80	12,200

While there is no question that Grape Nuts is a good cereal food, it is difficult to understand why the manufacturers should make claims so absurd and contrary to fact."

Jams, Jellies and Preserves.

Probably no class of food materials is more generally adulterated than the jams, jellies and preserves. It is possible to get samples purporting to be one of these preserved fruit products which contains no fruit whatever. We have found samples in this state which contained glucose, starch paste, salicylic acid, a coal tar dye and some seeds which were likely the seeds of grass rather than of fruit. This comprised the contents of one of the jars of jam which we examined. In another series of jams there was a small amount of fruit in such condition as would allow of its easy recognition, but the great mass of the jam was made up of glucose syrup and starch paste, with a considerable amount of salicylic acid added to prevent fermentation.

See table of analysis on following pages:

Canned Soups.

In general, very little adulteration was found to be present in the canned soups examined. However, this is true of all the samples, that a dilution to the extent indicated on the label made an extremely "thin" soup, and at best the food values so obtained was extremely expensive. As a convenient and

easily prepared food, these soups furnish an article that is all that could be desired, but as a part of an economical dietary they have no place.

See table of analysis on following pages:

Tomato Catsups.

It is doubtful if any article of diet so generally contains preservatives as do tomato catsups. The addition of preservatives to this class of foods becomes necessary because the article is not entirely used up as soon as opened, but may be placed day after day upon the table, and a little used at a time. The preservatives used most commonly are salicylic acid and benzoic acid, but others are occasionally used.

See table of analysis on following pages:

Cream of Tartar.

To make use of a form of expression commonly known as the Irish bull, many of the cream of tartars on sale in our state are something else; that is, they contain no cream of tartar whatever. This is a condition that would be remedied by the operation of such a law as is comprised in the Brosius bill.

In many instances our merchants know what they are purchasing, and yet they sell these inferior goods under false names, and for better materials; the price, however, is not lower. These so-called cream of tartars are what are known in the trade as "C. T. S." That is, cream of tartar substitute, an article made up of burnt alum, or acid calcium phosphate, or some other cheap acid constituent to take the place of the higher priced cream of tartar. Usually starch, gypsum or some other worthless filler is added in addition.

One of the retailers told me he knew the sample I had just secured of him was not cream of tartar, yet he did not hesitate to sell it under a false name. In many respects some of our retailers are not more honest than the wholesaler who supplies their goods.

See table of analysis on following pages:

Baking Powder.

Two years ago when these investigations were undertaken for the first time, a very considerable number of low-grade baking powders were on the market. This year we have found a decided improvement, for not only have many of the lower grades disappeared from the state, but in addition there has been a decided improvement in the better grades.

The value of baking powder is primarily determined by the amount of gas eliminated by it under the conditions associated with the kneading of bread. There is another condition, however, which is very important, and that is as to how the residues from the baking powders exist in the bread, and what the effect of such compounds is upon the human system. In making bread with yeast the principal products of the action of the yeast plant are the gas and the alcohol, the latter of which is entirely dissipated during the baking.

Cream of tartar baking powders leave in the bread the double tartrate of sodium and potassium, which is commonly known as Rochelle salt, so frequently used as a laxative. The phosphate powders are changed during the bread-making process into phosphates of calcium and sodium, neither of which may be considered harmful, and which may even have an important function in bone and tissue formation.

Of another type of baking powders, and of still another to a less degree, one cannot be quite so confident of the harmlessness of the residual materials. These are the alum and the alum phosphate powders. It is true that only small amounts of alum may be in a form capable of being dissolved by the digestive fluids, yet, on the other hand, we know of the harmful effects of large quantities of soluble aluminum salts. These salts have the power of

interfering with the process of digestion, and while there is no certain knowledge that the small amounts present in bread and biscuit made with alum baking powders will produce harm, yet the preponderance of opinion of experts is unfavorable to their use.

See table of analysis on following pages:

Vinegar.

It is a fact that most of our citizens pay little attention to the nature of the vinegar they use. Vinegar is usually purchased not only as a material for rendering other foods sour, but quite as much for the fine flavor possessed by the better grades. In this country preference is generally given to the vinegar made from apple cider, and it is supposed that such vinegar is what we usually get in the stores. So highly esteemed is the cider vinegar that it commands a distinctly higher price, and vinegars from other sources are made to imitate it as nearly as possible.

But on inquiry in this state it developed, to our great surprise, that to the ordinary consumer vinegar was vinegar, no matter what its source, and that there was very rarely a call for cider vinegar as such. As a matter of fact, there is little pure cider vinegar on sale in this state, but much imitation cider vinegar is sold in its stead. So far as the strength of the vinegars is concerned, there is little to complain of, the standard of from 4 to 5 per cent. acid required in other states being usually found.

The practice of one firm of manufacturers is most reprehensible, and calls for severe condemnation. Sample jugs of apple cider of excellent quality are sent out by Wallace and Gregory Bros., of Paducah, Kentucky, and a totally different vinegar is sent in the larger packages, even though the same quality was promised the retailer. This was the experience of at least one of our retail grocers, the Gary Bros., of Bozeman.

See table of analysis on following pages:

The Use of Preservatives.

The question of the continued use of the small quantities of antiseptics which are present in so many foods is a very important one. There is no doubt that these antiseptics prevent, to a greater or less degree, the digestion of foods, and anything that hinders digestion is hardly desirable in food. It is entirely likely that a strong person may use repeatedly food containing such adulterants, but if so it is because his powers of digestion are sufficiently great to overcome their inhibitory effect. With persons of weak digestive power foods so preserved can hardly prove other than harmful. On the whole, it seems only fair that we should know exactly what we are eating, and that we should be in a position to avoid that which is harmful. In this connection the following testimony given before the Senate Committee on Manufactures is pertinent to the discussion:

Committee on Manufactures, United States Senate,
Imperial Hotel, New York City,
Thursday, November 16, 1899.

TESTIMONY OF PROF. RUSSELL H. CHITTENDEN.

Russell H. Chittenden, sworn and examined:

The Chairman. What is your profession, and where is your residence?

Prof. Chittenden. I am professor of physiological chemistry in Yale University, and Director of the Sheffield Scientific School, New Haven, Conn.

The Chairman. Will you kindly state briefly what course of study you have pursued, and what degrees you have taken, with the purpose of taking on record your preparation for the profession which you follow, and also state what experience you have had?

Prof. Chittenden. I was graduated from the Sheffield Scientific School of Yale in 1875 with the degree of Bachelor of Philosophy. I studied physiology and physiological chemistry and allied branches in Heidelberg University in 1878 and 1879. I took the degree of Doctor of Philosophy at Yale in 1880, and have been professor of physi-

ological chemistry at Yale ever since 1882. I am also a member of the National Academy of Sciences and president of the American Physiological Society.

The Chairman. Have you, in the course of your study and experience, had occasion to analyze food products in this country?

Prof. Chittenden. Ever since 1882—for the last seventeen years—I have been very much interested in problems connected with the study of digestion and nutrition. In fact, that has been one of my special lines of work, and in that direction I have had occasion to study the action of a large number of substances with reference to their influence on digestion and nutrition, and have had occasion to make various analyses of food products.

The Chairman. And have you given special attention to the study of the use of preservatives or antiseptics?

Prof. Chittenden. That has come incidentally; in fact, I have studied a large number of substances which at the time were not in use as preservatives, but have become prominent since that time as such.

The Chairman. What are the usual preservatives used?

Prof. Chittenden. So far as my knowledge goes, the number is very large, of course, varying according to the character of the food product which is under consideration. Vinegar, acetic acid, common salt, various salines, borax, or sodium borate, boracic acid, salicylic acid, and a great many others which I need not mention, perhaps.

The Chairman. I would like if you would give the committee the benefit of your opinion generally as to the use of antiseptics in food.

Prof. Chittenden. Summed up in a few words, I think that there are occasions and there are products where it is desirable at times to use preservatives, but I have the general feeling that it is exceedingly important that we should have some law or some method of control by which all food products of any kind to which preservatives have been added should have a label or some mark which would specify the nature or character of the substance added, and the quantity of that substance added. In other words, I do not believe that any general law which would exclude the addition of what you speak of as poisonous substances would suffice, because I think it is a very difficult matter to find a body of men who will agree upon what constitutes a poison. I can perhaps illustrate my meaning, if I speak more fully, by giving an illustration: Take, for example, the gastric juice; that is to say, the stomach juices upon which we all depend for the digestion of any food. One of the governing agents there is the hydrochloric acid, which is present in the gastric juice to the extent of two-tenths of one per cent. That is perfectly harmless. It is an indispensable agent of digestion, and yet every chemist knows that hydrochloric acid, or muriatic acid, as the chemist calls it, sometimes is one of the most poisonous substances in the concentrated form.

So, again, with ordinary vinegar or acetic acid, which is a common preservative for articles of food, and has been in use for many years. In that form it is perfectly harmless, but in the concentrated form it is one of the most violent poisons. You cannot conceive of anything more poisonous. So with many other substances which we use frequently as preservative agents, or as additions to our food; they are perfectly harmless in small quantities, but when the quantity is increased become poisonous. In other words, it is a question of quantity. It is no question of the substance whatsoever.

I think you might say that that illustrates the general principle. It is hard to define what poisons are. Some of the most violent poisons are, in fact, in small quantities, very judicious agents.

There is an old saying that every medicine is a poison, and every poison a medicine. It is a question of quantity. In certain definite quantities we cannot well say that all poisonous substances must be excluded, but we can insist upon a law which will compel the stamping on a label of this or that agent, which is added for this or that purpose, and the quantity; then we have something that may be controlled for the great benefit of the people.

The Chairman. Will you please state the difference between a poison and an antiseptic?

Prof. Chittenden. I do not think that one can well make a direct statement which would specify a difference. Many antiseptics are violent poisons, when the quantity is sufficiently large. Hydrochloric acid, to come back to the old illustration, is an example; but of course, if you increase the quantity beyond a certain point its antiseptic action would be manifest, but would also produce death if brought in contact with the living body, internally.

The Chairman. What is the action of antiseptics on food; what are they used for?

Prof. Chittenden. The primary object, as I understand it, is to prevent the growth and development of micro-organisms, which are ordinarily present, but they prevent

their development, and consequently interfere with the production of poisonous products which would tend to contaminate the food.

The Chairman. It would also interfere, would it not, with digestion?

Prof. Chittenden. I do not think that that necessarily follows, but I think that as a rule antiseptics would interfere with such action if the quantity were sufficiently large. That varies with the individual bodies.

The Chairman. Have you ever examined any of the antiseptics sold for preserving milk, for instance? Have you seen any of those antiseptics put up in bottles?

Prof. Chittenden. No; I have never analyzed any of those. In fact, I know nothing of them, except by hearsay.

The Chairman. We have brought before our committee quite a number of antiseptics that are advertised under different names. In Chicago the thing called "formaldehyde" was brought in.

Dr. Wiley. Yes; it was called "Freezum."

Prof. Chittenden. I have heard of those things.

The Chairman. Do you think it wise that those articles should be permitted to be sold generally and indiscriminately among the people? Take formaldehyde, for instance. Do you think that dangerous?

Prof. Chittenden. I do not think that it ought to be used indiscriminately.

The Chairman. What articles of food have you analyzed that have conveyed or shown the presence of antiseptics?

Prof. Chittenden. I have analyzed very few that have shown the presence of antiseptics. Of course, in the course of the period I have mentioned I have had occasion to analyze a great many, but, after all, my special line of work has been rather in the line of studying the physiological effects of a variety of agents, some of which have come into prominence as preservatives.

I have analyzed some products, but most of those which have fallen into my hands have been free from impurities. I have analyzed some of the preserved beef, etc., for the United States government, but with one exception they were all free from any additions. The only one which I can recall which had anything in the line of addition contained simply a large amount of common salt, with just a trace of niter—a very minute trace. It was practically the addition of salt.

The Chairman. Will you please describe the effect that the preservative has on the stomach?

Prof. Chittenden. That depends altogether on the nature of the substance which is meant by the word "preservative." Alcohol, for example, is a good preservative. In some quantities, alcohol, so far as can be measured by experimental evidence, has very little, practically no, injurious effects in small quantities. So far as the digestive processes are concerned, it rather stimulates than retards the digestion, so far as can be measured by experiment. Among common preservatives there is to be found common salt, and in small amount that tends to increase the rate of digestion; but as the quantity of salt is increased you find that there is a falling off in digestive action. The salt tends to retard the solution of the food stuff; but still, if one is to give a thoroughly accurate answer to such a question, one must keep in mind that what we call digestion is the result of a variety of physiological processes. A layman thinks of digestion as one process, but it depends upon the solvent action of a given quantity of the gastric juice, and is modified by the rate of flow.

As you add a certain quantity of alcohol to a given quantity of stomach contents, you find that the quantity of alcohol in that given volume will retard the rate of digestion. It tends to slow the solvent action. But in the living stomach you have an increased rate of flow as the result of the alcohol, and one balances the other to a certain extent. In the living stomach a certain quantity of alcohol present does not interfere with the digestive processes. It has, on the other hand, physiologically speaking, made perhaps a greater drain on the body, because it has called forth an increased secretion of the gastric juice, which means increased labor on the part of the organism to produce that gastric juice.

Then the rate of digestion depends upon the peristalsis. We all know the benefit of taking an after dinner cup of coffee—that it improves our digestion. It does not increase or decrease materially the rate of solvent action, but it increases the peristaltic movements of the intestine, and in that way the rate of digestion is increased. So that there are a great many problems of that kind which really must be considered in attempting to answer any such general question.

Of course, there are agents like alcohol which, taken in large quantities, produce direct effect on the mucous membrane of the stomach by inflammation, etc., but that means more especially in large quantities. So hydrochloric acid of the gastric juice belonging in the stomach does no harm, as two-tenths of one per cent.; but 5 per cent. would have a local inflammation at once. So, as I have said, quantity must always be taken into account in such cases and in such connections.

The Chairman. What is the effect on the stomach of the use of salicylic acid?

Prof. Chittenden. So far as my own observation and experience goes, there is almost invariably a retardation of digestion in the stomach.

The Chairman. It has a tendency to stop or paralyze?

Prof. Chittenden. I should say retard, rather. And it is said that the long continued use of salicylic acid results in local effects, but of that I do not know.

The Chairman. Local effects—how?

Prof. Chittenden. Local effects on the mucous membrane; but I do not by personal experience as to that.

The Chairman. How is it with regard to borax? That is a matter that has been under discussion before the committee.

Prof. Chittenden. I have made a good many experiments with borax and boracic acid under varying conditions, and so far as it can be stated in a general way—I know that my own experiments indicate that small amounts of borax produce no measurable effect that could be spoken of as deleterious; in fact, very small amounts tend to increase, if anything, the rate of digestion. That is specially true of boracic acid, and borax is in itself, I think, a little inclined to retard digestion, so that the boracic acid is not so active as the sodium borate or borax.

I have tried a large number of feeding experiments on dogs, with reference not so much to digestion by itself as with reference to the combined or possible combined action of digestion and the other processes of nutrition; and where the quantities given are small, there are no injurious effects that can be noted at all, but where the quantity given is large enough, if you push it to the limit, you will find that there is produced a nausea and vomiting. That is the maximum effect that I have observed. The urine will frequently become alkaline with large quantities of borax, but not in small quantities.

The Chairman. Boracic acid is a product of borax?

Prof. Chittenden. Yes.

The Chairman. Is it changed in its formation—and how do you make it?

Prof. Chittenden. You simply separate it from borax by simply withdrawing; that is, borax is sodium united with boracic acid, just as common salt is sodium combined with boracic acid, or combined with the radical, the chlorine. You can take borax and separate boracic acid from it.

The Chairman. In the preservation of meats in this country we use which—boracic acid or borax?

Prof. Chittenden. That I do not know by any personal knowledge.

Dr. Wiley. In former years borax itself was almost exclusively used, where used at all. In the last few years boracic acid is largely coming into use instead of borax, especially in preserving hams.

Prof. Chittenden. I may say that our Connecticut State Board, or rather the Agricultural Experimental Station, have made a number of experiments in which borax has been found, and I think boracic acid, but I think borax has been a little more prominent in those food products.

The Chairman. In such quantities as you have observed, did you consider it dangerous to the public health?

Prof. Chittenden. Not where I have seen it. I have heard of very large quantities being found, but in these analyses that have been reported at the Agricultural Experiment Station in New Haven the quantities were always small. The percentages were small.

The Chairman. Do you think that one-half of one per cent. of boracic acid in butter would be objectionable?

Prof. Chittenden. Not in my judgment; no.

The Chairman. I would like to get, for the benefit of the committee, your idea as to a national law to regulate the use of these preservatives or antiseptics.

Prof. Chittenden. My own opinion is that the best result would be obtained by a law which should compel the manufacturers to stamp upon the product the nature of the preservative used, and the quantity of the preservative present, and that then there should be a commission or some one in authority to whom such products could be referred, with power in such matters.

The Chairman. What do you say as to the use of copper and zinc colors to give vegetables a green appearance?

Prof. Chittenden. My judgment there is that their use should be prohibited, because, as I understand it, there is nothing gained except an effect which appeals to the eye purely. There is no question there of preservation, or of correcting the possible injurious effects of micro-organisms, but the custom is the addition of what we know to be a poisonous substance, and the only effect produced, as I understand it, is to deceive the eye. In other words, I see nothing to be gained by the addition of such agents, and there is possible danger.

The Chairman. Then by or through this commission you would not only have marked the preservatives contained, but in some cases you would prohibit the use of a certain class of preservatives?

Prof. Chittenden. So-called preservatives, which are well known to be absolutely poisonous and dangerous, I think it would be wise to prohibit.

The Chairman. You have given this question of digestion long and careful study. Will you kindly name some of the articles which you consider improper to be sold for food that are being sold as food?

Prof. Chittenden. You mean as additions to food?

The Chairman. Yes; either as additions, or as food products themselves.

Prof. Chittenden. I should say that such agents as you referred to some moments ago—sulphate of copper and salts of that kind which are used to color products—ought to be prohibited, for I see no possible occasion for their use as food products, or as additions to food products. And I should question the use of salicylic acid, and although I have very little knowledge of the action of formaldehyde, I am inclined to believe that that product is of rather questionable value in such mixtures. But, as I say, I have no personal knowledge. I have never experimented sufficiently with formaldehyde to warrant me in making a definite statement.

The Chairman. Formaldehyde is a preparation from wood alcohol, is it not?

Prof. Chittenden. Yes. It is sold, of course, under a variety of names. The "Freesum" spoken of a few moments ago, is essentially a formaldehyde product.

The Chairman. I am very much obliged to you, Professor, for giving us your time and attention, and if you have any suggestions which you would be willing to make to the committee, I should be very glad to receive them, as they would undoubtedly be valuable to the committee, regarding any foods that are sold that ought to be marked differently from what they are.

Prof. Chittenden. What seems to me to be the one important point which I think I have perhaps emphasized sufficiently already, is the great importance, as to all food products which contain additions, of having those products so stamped that they will show the nature of the substance added, and the quantity of that substance which is present. That seems to me to be one of the very essential points for the protection of the community at large, and one which ought not to be harmful to the manufacturers of such products.

The Chairman. Upon the question of the establishment of such standards of purity, or standards of safety, or standards of strength foods—do you think that such standards could be established under a commission such as you suggested?

Prof. Chittenden. I think it could; yes. I think such a commission would be of very great value, of very great help, in establishing better conditions in all these respects.

The Chairman. Would you favor fixing a standard for everything that could be reasonably fixed?

Prof. Chittenden. Yes; so far as it can be done.

Prof. E. H. Jenkins, of the Connecticut Experiment Station, testified as follows:

"I should like to say a few words in regard to the use of antiseptics and our position in regard to them. There is a great deal of conflicting evidence with regard to their healthfulness, which, it seems to me, is totally irrelevant to the question at issue.

"It is unquestionable that salicylic acid and borax are used in medicine, and recommended by physicians, and, we must believe, are valuable remedies in their place. So, also, they are used in food in very considerable quantities, and certainly take the place, as far as preserving food is concerned, of salt, and wood smoke, and vinegar, which were the old time accepted antiseptics. I doubt whether they are any more poisonous than salt, wood smoke and vinegar may be to certain persons. As I said before, a poison is a thing you cannot define. A thing is a medicine (that is, it is a good thing) in one dose; it is harmless in another dose; injurious in another dose, and a poison in another and a larger dose. Strychnine is poisonous in certain quantities; so is arsenic. A person can poison or kill himself even with vinegar, if he takes enough of it. But it seems to me that that does not touch the point.

"The point is this, that every man's system is a law unto himself, and the comfort of living depends largely for each individual upon his learning, by his own experience of life, what agrees and what does not agree with him. Two persons apparently in equally sound health are very differently affected by the same food. Sugar is a thing that I cannot take to any extent without being made uncomfortable and even sick by it. Yet I had a man in my employ at one time who was cured of violent attacks of dyspepsia by taking large quantities of sugar.

"There are a good many people who cannot abide pickles; some cannot abide wood smoke; some cannot stand much salt food. The old time preservatives and the modern preservatives are different in this, that in the old time affair every person had information at once by taste and smell what he was taking, and could tell from his experience whether it agreed with him or not. These modern preservatives are used without any notice given by the vendor that they are used. The opportunity and the right of the individual to find out whether they will or will not injure him is taken away from him. That, it seems to me, is the rational ground for requiring notice of the presence of these preservatives. Such notice should be given to the consumer.

"I believe that preservatives may have their place in food—a legitimate place—but certainly they should not be used unless it is distinctly stated on the packages which enclose the food, unless notice be given to the buyer by the seller that the preservatives are used. This information should be given in some way. It should be made known that they are present, and in what quantity they are present. Take the one article of oysters. We may all agree that borax is perfectly harmless; but here is a sample of oysters that contain 38 grains of borax in the pound. Here is an invalid with a delicate digestion, for whom fresh oysters are ordered by the physician. I do not believe that any reputable physician would prescribe that his patient should take 38 grains of any considerable fraction of that material in that way when he knew nothing of it."

The Chairman. That is of borax?

Prof. Jenkins. It might work considerable disturbance in a delicate stomach, and I think that would be the opinion of a physician as to the case of an invalid lady, whereas when she was well she might be able to stand that dose without trouble.

In our own state the use of antiseptics was forbidden in the law, and then a provision was inserted further on which neutralized the effect of the prohibition. It was provided that when any matter or ingredient was added because the same was required for protection or preservation of an article of commerce to put it in a fit state for carriage or consumption, then it might be used. So that if we find borax or formaldehyde, the question now comes up, is it (borax or formaldehyde) necessary to fit the article for carriage or consumption?

The Chairman. Would you recommend a national law in regard to the use of antiseptics?

Prof. Jenkins. I am not enough of a legislator to feel competent to recommend anything in the way of national legislation. It is all a question of how far it is a matter for the general government, as distinguished from state governments, to regulate these things. But if it is deemed advisable that the United States government shall pass a pure food law, it seems to me certainly wise that such a law should forbid the use of antiseptics that are not evident to the taste or smell, unless their presence is called to the attention of the purchaser, either in the label or in the sale of the article.

The Chairman. What do you think of having a national board under the direction of the Department of Agriculture—a national board or commission to be appointed by the President, to fix standards of foods, and to control the use of preservatives generally?

Prof. Jenkins. I think that the fixing of standards for foods, or for certain foods, would certainly be a most desirable thing. As to the special means by which that could be accomplished I have not given the matter sufficient thought, and I do not feel competent to speak. I think it is the right thing to be accomplished, and that such standards for certain foods ought to be fixed.

The Chairman. And you see the advantage, I suppose, of a national law as against state laws, because states might have conflicting laws, rules and regulation on the same subject. A man may be a perfectly honest manufacturer, and may send goods into your states marked in one way to comply with the laws of your state, and may have to mark or label them differently to send them into another state.

Prof. Jenkins. Yes; there is that objection. Manufacturers would have to brand their goods in different ways in order to meet local regulations.

The Chairman. Have you any other suggestion to make to the committee?

Prof. Jenkins. I think I have nothing more, unless you have some questions to ask.

The Chairman. I think I have nothing more to ask you, Professor.

Prof. Willis G. Tucker, of the Albany Medical College and the New York State Board of Health, gave the following testimony:

Willis G. Tucker, sworn and examined:

The Chairman. If agreeable to you, Professor Tucker, I will ask Dr. Wiley to propound the questions to you, as I am not feeling at all well this morning.

Prof. Tucker. It is quite agreeable to me.

Dr. Wiley. Please state your profession, Professor Tucker.

Prof. Tucker. I am professor of chemistry in the Albany Medical College and director of the State Board of Health of New York state.

Dr. Wiley. Have you long been engaged in the examination of food products?

Prof. Tucker. I have been more or less engaged in that work for a period extending over some twenty years.

Dr. Wiley. Have you studied the subject of adulteration of human food?

Prof. Tucker. I have.

Dr. Wiley. In the examination of drugs have you ever had occasion to examine those which are sometimes used as food preservatives—such as formaldehyde, salicylic acid, benzoic acid, etc.?

Prof. Tucker. Not specially; no, sir.

Dr. Wiley. In your former examination of food products was your attention directed to the use of preservatives in foods?

Prof. Tucker. At the time we were most actively engaged in that work the use of food preservatives was not nearly so common as now, so that we have done not very much work in that particular direction.

Dr. Wiley. Can you state what is the attitude of the New York State Board of Health toward the subject of preservatives in food?

Prof. Tucker. I do not think that they have ever declared their attitude precisely. The matter has come up in various ways in our legislature during the last few years, and our general law covers the whole case really, because it prescribes the use of deleterious constituents, and a food preservative, if found to be deleterious, would not need to be specifically named in the law or in the regulations of the board. It would come under the general law. We have law enough perhaps in New York state. The difficulty is in enforcing it without sufficient appropriations to carry on constant inspection, and prosecuting cases, or to secure the co-operation of the district attorneys of different counties. Without that no great results can be reached.

Dr. Wiley. Has the State Board of Health or any other authority established standards of purity for foods?

Prof. Tucker. They have the right to do so, but they have established no such standard except in the case of mustard, I believe, some years ago, and two or three other articles.

Dr. Wiley. As to vinegar, do you know whether they have established a standard for that?

Prof. Tucker. We have a special law that does that.

Dr. Wiley. What is pure vinegar under the law of the state of New York?

Prof. Tucker. It is outside of my department, as I stated, but my impression is that it is $4\frac{1}{2}$ per cent. absolute acetic acid, and $2\frac{1}{4}$ per cent. of cider vinegar.

Dr. Wiley. Is it your information that only a cider vinegar is regarded as a pure vinegar in this state, or is malt vinegar regarded as pure also?

Prof. Tucker. Yes; malt vinegar, if not sophisticated.

Dr. Wiley. What is your opinion, as one of the health officers, as to the effect of food preservatives on the general health?

Prof. Tucker. That is a pretty broad question. Salt is a preservative; sugar is a preservative; alcohol is a preservative. We have had and used preservatives from time immemorial. The housewife puts up brandy peaches and other such things; we have corned our meats, and have used organic and inorganic substances in the preservation of food products from time immemorial. So that I do not think we could start by saying that the general use of preservatives is injurious. In many cases there is certainly room for difference of opinion as to the effects of the quantities of such things as borax, boracic acid, salicylic acid, formaldehyde and such things, in the quantities ordinarily used in foods for the human system. That difference of opinion exists among experts; it is a "disagreement of the doctors," so to speak, and has been heard many times in our legislative hearings and before committees.

Dr. Wiley. I call your attention to the subject because your opinion will be valuable to the committee, as an expert, as to what legal steps should be taken to control the use of preservatives in foods by the Federal government, not the state government, but for the controlling of interstate commerce, inasmuch as that is as far as the Federal law can apply. For instance, Professor Tucker, you have a law in the state of New York which prevents food adulteration. If a person is convicted he may be a perfectly innocent person, because the food which he sells may have been made in Pennsylvania, and New York is powerless to strike the guilty party. The object of the Federal law would be to strike that guilty party. What would be your idea of a Federal law controlling the use of any suspicious preservatives—not sugar, nor salt, but such things as you have mentioned yourself as being doubtful—such as salicylic acid and formaldehyde.

Prof. Tucker. My opinion being that salicylic acid is the most objectionable of the preservatives now said to be commonly used, it would be desirable, I think, if food articles to which it has been added had the fact stated on the label or package in which the goods are contained. I should not feel like giving it as my opinion that salicylic acid is necessarily harmful to all persons in such small quantities as may be sufficient to preserve certain food articles; but I think there is some evidence tending to that view, and that the public should not be fed with staple articles of food in which a medicinal agent so active as salicylic acid is introduced, perhaps in excessive quantities, and by ignorant compounders, without knowing the fact.

Dr. Wiley. Do you not know that in point of fact the health officers of most countries have interdicted the use of salicylic acid in food products?

Prof. Tucker. I believe that it has been interdicted in several foreign countries—for goods of home consumption at least.

Dr. Wiley. What is your opinion, Professor Tucker, regarding the establishment of a national commission of competent experts to determine questions of this kind?

Prof. Tucker. I should entirely favor it. I think that is the right direction in which we should move. I think much time is lost and money uselessly spent by the

different states in going over and over the same ground, and in a different way. There is much talk in the air about adulteration—so many people believe that the ordinary articles of food are so much adulterated or sophisticated, that they need to be answered and informed. For my own part, I believe there is much less adulteration than is popularly supposed. The case of starch and sugar is a case in point. The common idea that confectionery sugar is starch or marble dust. Probably you could collect thousands of samples without finding other than pure samples. It is a case like that of calves' brains, and milk, and a thousand other fictions.

Coffee is sold as a mixture. Of course, there are many common varieties, but I do not believe that they consist of the deleterious materials and rubbish which we find published in some of our daily papers, such as was published in our city last summer—a case or two being spread out into a great lot of figures. The public is misled and misinformed. Our state, in attempting to do the work for itself, goes all over what another state has done. One reason that I do not always favor investigations of this class is because of the work that such men as you (Dr. Wiley) have done, so much standard classical work, and for New York state to re-collect the same articles, and to go all over the work again would be to waste money. But the idea of a national commission, who should have competent means to investigate and tell the people what articles are and what are not harmful, appointed to recommend national legislation bearing on these questions—that is the right method of going to work at the remedy, I think.

Dr. Wiley. Aside, now, from substances that may be considered injurious to health, what is your idea of other adulterations which are not particularly injurious, but simply fraudulent.

Prof. Tucker. I do not know that they need any other special protection than the state gives to other articles of consumption. The man who buys the cheapest goods he can find in the market has no right to expect that he will get the first quality. And, if we pay the price for cotton goods, we cannot expect to get all linen. If we pay the price of shoddy, we cannot expect to get pure wool. If we buy the cheapest ground coffee and the cheapest syrups and flavoring extracts and the like that we can find in the market, and the lowest grades of pease and such things, I do not think that the consumer has the right to expect that the state will assure him that he is getting articles of the purest quality.

I think that perhaps we have had a little more legislation than we need—legislation which in some cases has been oppressive, and has affected certain industries harmfully, and which the public has not needed or deserved.

Dr. Wiley. In other words, it is your opinion that a food product which is in itself wholesome should not be forbidden to the market?

Prof. Tucker. Certainly; that is my opinion.

Dr. Wiley. Hence, you would say that a law forbidding the sale of oleomargarine, as such, would be unjust?

Prof. Tucker. Entirely so; fit for the dominions of the Czar of Russia; not for the United States.

Dr. Wiley. But a law which would forbid oleomargarine to be sold as anything but oleomargarine would be right, in your opinion?

Prof. Tucker. Yes.

Dr. Wiley. And it should not be permitted to be sold as, for instance, honey?

Prof. Tucker. No. A man who goes into a department store and buys a pint of olive oil for 20 cents, has no right to expect that he is getting the real Italian oil. I do not know, as a matter of abstract form, that the state is called upon to protect him from the sale of cotton-seed oil, or peanut oil, or some other oil, in place of the real olive oil, any more than it would be called upon to guarantee to him that when he buys a linen handkerchief it should be all linen.

Dr. Wiley. What is to prevent that department store to which you refer from selling that oil for 80 cents, instead of 20 cents, and charging for the inferior article the price of the genuine article?

Prof. Tucker. I think business would settle that. A man willing to pay 80 cents, or the full price, would be capable of telling whether he got the right article.

Dr. Wiley. But is every ordinary consumer capable of judging the genuine article and distinguishing it from the other?

Prof. Tucker. I think that 90 per cent. of them would know the difference.

Dr. Wiley. Well, I do not think that 10 per cent. could. I doubt if 5 per cent. could.

Prof. Tucker. Undoubtedly the cardinal principle is that goods should be sold under their correct names. I do not think that an inferior or cheaper oil should be sold for olive oil, but I do not know how important a matter that is in comparison with a great many other matters of far greater importance; that would be for a commission to determine. I should not deem that a matter of great importance.

Dr. Wiley. I will say that I constantly use cotton oil on my salads at my own house because I am too poor to buy the genuine olive oil, but I get my cotton oil from a dealer who sells it for what it is, and makes no pretense that it is anything else. That

is the proper way to do. But I have no doubt that hundreds of people are paying for olive oil, and not getting it, to the great detriment of the olive oil industry. So that I think it should be a misdemeanor to sell an article for what it is not; and we must remember that the question is not whether the article is a linen handkerchief, but that it is a matter of human food.

Prof. Tucker. I agree with you that goods should be as represented.

Dr. Wiley. You are not familiar with what the State Board of Agriculture has done in regard to dairy products and vinegar?

Prof. Tucker. I should rather not speak for them. They have a department of chemistry in Albany and other places throughout the state.

Dr. Wiley. I entirely agree with Professor Tucker concerning erroneous opinions regarding food adulteration. It is not nearly as bad as represented, but if it exists at all it should receive public attention. Is there any other statement that you would like to make, Dr. Tucker, for the benefit of the committee in regard to your work in connection with the Board of Health of the State in respect to the control of food products, or as to the method in which Federal legislation might help you in your work? If there is any suggestion you can make in that line it would be useful to the committee.

Prof. Tucker. I do not know that there is any suggestion that I could make, because that involves legal considerations that I have not considered—as to how largely the national government could control the sale of articles made outside the state, in a state, or if in the state, their sale in that same state.

Dr. Wiley. Of course, the national Congress could not enact laws for the benefit of the state, but it could control commerce as between the states, so that if the sale took place in one state, and the manufacture took place in another, they could punish for the wrong doing. The chief object of a state law would be to supplement that and make it effective. I do not think that it is the purpose of this committee of the Senate, or of anyone else to propose the enactment of a law having any restrictive provisions with regard to commerce in food products. On the contrary, the largest liberty could be allowed, and would be allowed, under such a law. The only point to be established and required would be that complete honesty should characterize interstate dealings in food products.

Prof. Tucker. I believe that the findings or conclusions of such a commission as you refer to would be very valuable, in that they would probably be enacted into law in the various states.

Dr. Wiley. They would be a guide for state legislation; that is a good point.

Prof. Tucker. The boards of health of a state would, I think, regard with much favor any findings of a national commission which was made up of experts in those lines of work, and I think, therefore, that it would be a great gain to the states. It would be doing what a good many states are undertaking to do, or are about doing for themselves. It would give a model for the states.

Dr. Wiley. In a bill that was before the last Congress a provision for such a board or commission was made—a commission to prescribe food standards, etc.

Dr. O'Sullivan. How was the board to be composed?

Dr. Wiley. It was to be composed of physicians, physiologists, etc., and to be appointed by the President of the United States.

Dr. O'Sullivan. Such a board so constituted would be the best instrumentality for determining whether the preservatives that have been under discussion are or are not beneficial.

Prof. Tucker. When there were up before the state legislature some bills regulating the sale or employment of some food article, the interests that favored its use came before the committee, by representatives paid by them, to argue the case. Hence, partisan views are often exploited in this manner, and we do not even get the facts of the case. A commission such as is suggested, would give us the facts.

Dr. O'Sullivan. Not only that, but the action of preservatives whose action is in question can only be settled by an impartial series of experiments conducted by physiological chemists.

Dr. Wiley. In connection with what Dr. Tucker has said as to a model for state legislation, I will state that the Senate of the state of Indiana applied to me last year for a model of a pure food bill. I took a copy of the bill then before Congress, and sent that to them, and that bill was enacted bodily by the legislature of Indiana. So that I think a law of Congress would have this beneficial result, that it would tend to unify the legislation of the states.

The work done and the data furnished in this report is not nearly as complete as we would wish it to be, but we have been crowded for time, and have been unable to make the investigation more extensive.

The series of analyses submitted to the people of Montana for their inspection, however, should prove of great interest. That some provision for our protection is required is manifest.

It should be one of our first duties to take such steps as may seem best adapted to secure foods which shall meet the requirements of the most critical. This can easily be done.

THE MONTANA AGRICULTURAL EXPERIMENT STATION,

Bozeman, Montana.

Nov. 30, 1900.

CANNED BEANS FOUND ADULTERATED.

Name of Brand	Name of Manufacturer.	Where Manufactured.
150 Spring Beans Oval Brand	A. Booth Packing Co.	Baltimore, Md.
151 Shield Brand	J. S. Farren & Co.	Baltimore, Md.

CANNED BEANS NOT FOUND ADULTERATED.

152 Magnet Brand	Isaac Robinson	Baltimore, Md.
153 Gopher Brand	Foley Bros. & Kelley Mer. Co.	St. Paul, Minn.
154 Jumbo Brand	Miller Bros. & Co.	Baltimore, Md.
155 Pearlless Brand	The C. H. Pearson Packing Co.	Baltimore, Md.
156 Club House Brand	Franklin MacVeagh & Co.	Chicago, Ill.

CANNED PEASES NOT FOUND ADULTERATED.

157 Green Island Brand	Green Island Packing Co.	Green Bay, Wis.
158 Monarch Brand	Rold, Murdoch & Co.	Chicago, Ill.
159 Fort Snelling Brand	Foley Bros. & Kelley Mer. Co.	St. Paul, Minn.
160 Club House Brand	Franklin MacVeagh & Co.	Chicago, Ill.
161 Petits Pois Extra Fins "Le Sciel Malines"	Fabrique International	France
162 Petits Pois Tres Fins	Delory	Lorient, France

CANNED CORN NOT FOUND ADULTERATED.

159 Leopard Brand	Geo. R. Newell & Co.	St. Paul, Minn.
160 Diamond Brand Sugar Corn	Atlantic Canning Co.	Atlantic, Iowa
161 Extra Sweet Corn	Rold, Murdoch & Co.	Chicago, Ill.
162 Seal Brand, Standard Quality	P. J. Ritter Conserve Co.	Philadelphia, Pa.
163 Fort Snelling Brand	Foley Bros. & Kelley Mer. Co.	St. Paul, Minn.
164 Club House Brand Extra	Franklin MacVeagh & Co.	Chicago, Ill.
165 Honey Drop Sugar Corn	Davis Baxter & Co.	Portland, Me.

SOUPS FOUND ADULTERATED.

Lab. No.	Name of Brand.	Name of Manufacturer.	Where Manufactured.	Preservative.
1248	Huckins Terapin Soup	J. H. W. Huckins & Co.	Boston, Mass.	Salticylic acid.
1256	Van Camp's concentrated Vegetable Soup.	The Van Camp Packing Co.	Indianapolis, Ind.	Salticylic acid.
1260	Van Camp's Concentrated Mock Turkey Soup.	The Van Camp Packing Co.	Indianapolis, Ind.	Salticylic acid.
1260	Van Camp's Concentrated Ox Tail Soup.	The Van Camp Packing Co.	Indianapolis, Ind.	Salticylic acid.
1213	Van Camp's Concentrated Tomato Soup.	The Van Camp Packing Co.	Indianapolis, Ind.	Salticylic acid.

SOUPS NOT FOUND ADULTERATED.

1347	Hucklin's Green Turtle Soup—White Label.	J. H. W. Huckins & Co.	Boston, Mass.	
1369	French Bouillon	Armour Packing Co.	Kansas City, Mo.	
1381	Clean Broth	Franco-American Food Co.	New York	
1380	French Soup, Mutton.	Franco-American Food Co.	New York	
1384	French Soup, Chicken	Franco-American Food Co.	New York	
1387	Van Camp's Concentrated Chicken Soup.	The Van Camp Packing Co.	Indianapolis, Ind.	
1391	Red Letter Double Concentrated Beef Soup.	The Muller-Blackledge Co.	Indianapolis, Ind.	
1413	Van Camp's Concentrated Bouillon	The Van Camp Packing Co.	Indianapolis, Ind.	
1414	Red Letter Consomme.	The Muller-Blackledge Co.	Indianapolis, Ind.	

CANNED TOMATOES FOUND ADULTERATED.

Name of Brand	Name of Manufacturer.	Where Manufactured.	Preservative.
1360 Casino Brand Tomatoes	Franklin MacVeagh & Co.	Chicago, Ill.	Salticylo acid
1361 Home Brand Tomatoes	Griggs, Cooper & Co.	St. Paul, Minn.	Salticylo acid
1362 Chicago Best Quality Guaranteed Tomatoes	Steele & Weisles Co.	Chicago, Ill.	Salticylo acid
1363 Treveline's Tomatoes	Reid, Murdoch & Co.	Chicago, Ill.	Salticylo acid
CANNED TOMATOES NOT FOUND ADULTERATED.			
1364 Wisconsin Tomatoes	T. R. Jones	Quantico, Md.	
1365 Nonpareil Brand Tomatoes	Alameda Canning & Packing Co.	San Francisco, Cal.	
1366 Queen Brand Tomatoes	Franklin MacVeagh & Co.	Chicago, Ill.	
1367 Utah Brand Tomatoes	Craig Bros.	Ogden, Utah	
1368 Red Knight Tomatoes	N. B. Maris	Arundel, Ind.	
1369 Monumental Brand Tomatoes	W. W. Taylor & Son	Baltimore, Md.	
1370 Ivy Leaf Brand Tomatoes	Thos. D. Miller	Weber, Ind.	

ANALYSIS OF TOMATO CATSUPS.

Name of Brand	Name of Manufacturer.	Where Manufactured.	Preservative.	Color Matter.
1371 Snider's Home-made Catsup	T. A. Snider Preserve Co.	Cincinnati, O.	Salticylo acid	Coal Tar Dye
1372 Priscilla	Franklin MacVeagh & Co.	Chicago, Ill.	Salticylo acid	Coal Tar Dye
1373 Blue Label	Curtice Brothers Co.	Rochester, N. Y.	Salticylo acid	Coal Tar Dye
1374 7-11 Tomato Catsup, Standard Brand	F. J. Ritter Conserve Co.	Philadelphia, Pa.	Benzole acid	
1375 Favorite Brand Tomato Catsup	F. J. Ritter Conserve Co.	Philadelphia, Pa.	Salticylo acid	Coal Tar Dye
1376 Shrewsbury Puree of Tomatoes	E. C. Hagar & Co.	Shrewsbury, N. J.	Salticylo acid	Coal Tar Dye
1377 Eagle Brand Tomato Catsup	Kured Pickle Co.	Denver, Col.	Salticylo acid	Coal Tar Dye
1378 Sunny Side Ketchup	The Tip Top Ketchup Co.	Chicago, Ill.	Benzole acid	Coal Tar Dye
1379 Extra Tomato Catsup	Reid, Murdoch & Co.	Cincinnati, O.	Acid Sulphite	Coal Tar Dye
1380 Standard Tomato Catsup	Standard Packing Co.	St. Louis, Mo.	Salticylo acid	Coal Tar Dye
1381 Bayle's Tomato Catsup	Geo. A. Bayle	St. Louis, Mo.	Acid Sulphite	Coal Tar Dye
1382 New Process	Gordon & Dilworth	New York, N. Y.	Salticylo acid	

ANALYSIS OF CEREAL BREAKFAST FOODS.

Label	Name of Article and by Whom Manufactured.	Per Cent Water	Per Cent Nitrogen	Crude Pro- tein per c't	Per Cent Ash.
157	Oat Meal Wafers, Nebraska Sanitarium, Sanitarium Bakery College View, Neb.	5.35	1.56	9.73	1.16
158	Graham Crackers, Nebraska Sanitarium, Sanitarium Bakery, College View, Neb.	5.11	1.70	11.19	1.11
159	Whole Wheat Wafers, Neb. Sanitarium, Sanitarium Bakery, College View, Neb.	5.81	1.53	11.13	1.19
160	Oat Meal Crackers, Nebraska Sanitarium, Sanitarium Bakery, College View, Neb.	4.54	1.44	11.50	1.23
161	Granose Biscuit, Battle Creek Sanitarium Health Food Co., Battle Creek, Mich.	6.94	1.86	11.63	2.36
162	Zwetsch, Battle Creek Sanitarium Health Food Co., Battle Creek, Mich.	6.66	1.52	11.90	1.19
163	Cream Shortened Biscuits, Battle Creek Sanitarium Health Food Co., Battle Creek	5.39	1.53	9.86	1.09
164	Pillsbury's Vitae, Pillsbury-Washburn Flour Mills Co., Minn.	6.29	2.07	13.94	.94
165	Roll Oat Meal, Roseman Milling Co. Mfg., by Sioux Milling Co., Sioux City, Iowa.	7.16	2.51	15.69	1.85
166	Roll Oat Meal, Roseman Milling Co. Mfg., by Sioux Milling Co., Sioux City, Iowa.	6.64	2.96	14.75	1.65
167	Roll Oat Meal, The American Cereal Co., F. Schumacher Mills, Akron, Ohio.	6.68	2.37	14.19	1.65
168	Roll Oat Meal, The H. O. Co., Clover Mills, Buffalo, N. Y.	8.31	2.39	14.94	1.84
169	Buckeye Rolled Oats, American Cereal Co., Chicago, Ill.	6.33	2.37	14.19	1.87
170	White Corn Meal, Sioux Milling Co., Sioux City, Iowa.	10.31	1.22	7.63	.75
171	Granose Flakes, Battle Creek Sanitarium Health Food Co., Battle Creek, Mich.	10.08	2.33	15.66	3.35
172	Wheat Grits, Battle Creek Sanitarium Health Food Co., Battle Creek, Mich.	5.25	2.71	14.86	.37
173	Shredded Whole Wheat Biscuit, The Shredded Wheat Co., Worcester, Mass.	6.55	2.31	13.81	1.81
174	Granose, Sanitarium Bakery, College View, Nebraska	6.35	1.79	11.19	1.65
175	Raisin Health Club Barley Food, Purina Mills, St. Louis, Mo.	4.96	3.31	14.44	1.72
176	Cracked Wheat, Postum-American Cereal Co., Chicago, Ill.	7.63	2.01	12.56	1.62
177	Grape Nuts, Postum-American Cereal Co., Chicago, Ill.	3.62	1.89	11.81	2.07
178	Cracked Oat Food, Pillsbury-Washburn Co., Minneapolis, Minn.	7.38	1.48	9.25	1.87
179	Granose, Battle Creek Sanitarium Health Food Co., Battle Creek, Mich.	4.94	2.30	14.33	2.02
180	Pettiford's Breakfast Food, American Cereal Co., Chicago, Ill.	6.14	1.46	9.13	.34
181	Rice Flakes, Leuhoff Bros., Detroit, Mich.	7.51	1.70	10.63	1.87
182	Wheatine, Empire Milling Co., San Francisco, Cal.	6.48	1.26	7.88	.47
183	Cream of Wheat, Orem of Wheat Co., Minneapolis, Minn.	7.32	1.85	10.31	1.51
184	Sioux Wheat Flakes, Sioux Milling Co., Sioux City, Iowa	8.10	1.87	11.69	.56
185	Sioux Wheat Flakes, Sioux Milling Co., Sioux City, Iowa	8.30	1.61	10.06	1.66
186	Ralston Health Breakfast Food, Purina Mills, St. Louis, Mo.	7.71	1.68	10.50	1.01

ANALYSES OF BAKING POWDERS. CREAM OF TARTAR POWDERS.

BRAND.	Manufacturer.	Where Manufactured.	Filler.	Available Carbonic Acid Gas.	Volume Carbonic Acid Gas.	Value Terms.	Price per lb.
172 Schilling's Best	A. Schilling & Co.	San Francisco, Cal.	None	14.05	122.5	.40	.40
174 Price's Cream	Price Baking Powder Co.	Chicago, Ill.	Starch	13.70	125.5	.27	.27
175 Golden Gate	S. A. Folger & Co.	San Francisco, Cal.	None	13.84	150.4	.25	.25
180 Royal	Royal Baking Powder Co.	New York City, N. Y.	Starch	13.03	145.4	.34	.34
181 Club House	Franklin MacVough & Co.	Chicago, Ill.	Starch	11.16	125.3	.30	.25
182 Monarch	Reid, Murdoch & Co.	Chicago, Ill.	Starch	9.55	107.7	.30	.30

ALUM POWDERS.

183 Home	Home Baking Powder Co.	San Francisco, Cal.	Starch	7.75	87.9	.15	.15
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ALUM-PHOSPHATE POWDERS.

184 Calumet	Cal. Baking Powder Co.	Chicago, Ill.	Starch	11.20	137.35	.25	.25
185 Chapman	Chapman & Smith Co.	Chicago, Ill.	Starch	7.25	83.9	.15	.15
186 R. C.	Jaques Manufacture Co.	Chicago, Kansas City, Omaha	Starch	9.03	107.9	.15	.15
187 Mountain Top	Courtney & Co.	Butte, Mont.	Starch	6.55	73.9	.15	.15
188 Palmo	McCormick, Behnke & Co.	St. Paul, Minn.	Starch	8.27	89.5	.15	.15
189 Perfect	Perfect Baking Powder Co.	St. Louis, Mo.	Starch	6.41	61.	.15	.15
190 Silver Queen	A. Booth	Butte, Mont.	Starch	4.15	49.3	.15	.15

PHOSPHATE AND SULPHATE POWDERS.

192 Snowdrift	R. C. Wallace & Co.	Helena, Mont.	Starch	11.19	137.5	.15	.15
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* Volume of gas liberated from one ounce of baking powder calculated to the normal pressure existing at Boston and to the temperature of 70 degrees Fahrenheit.

TABLE OF FLOUR ANALYSES.

Labo'y	Brand.	Miller and Town.	Moisture.	Nitrogen per cent	Crude Pro- tein per ct
1174 XXXX		Big Timber M. Co. B. T.	9.55	1.72	10.75
1175 Royal		Boseman M. Co., Boseman	10.05	1.92	12.00
97 Economy		Boseman M. Co., Boseman	10.00	1.55	9.69
102 Caratana		Boseman M. Co., Boseman	10.03	2.35	14.87
100 Pillsbury's Best		Pillsbury Washburn Co., Minneapolis, Minn.	9.05	2.50	13.75
80 Shakatchewan		N. Story & Co., Boseman	10.25	2.00	12.50
80 Montana Belle		N. Story & Co., Boseman	10.21	1.90	10.00
113 Occidental		Boseman Milling Co.	10.00	2.45	15.50
114 Caratana		Boseman Milling Co.	10.51	2.14	13.38
115-3111 Mrs		Boseman Milling Co.	10.17	2.42	15.13
116 Electric Light		Boseman Milling Co.	10.21	2.27	14.81
117 Choice		Boseman Milling Co.	10.35	2.35	14.69
119 Royal		Boseman Milling Co.	10.11	2.50	15.63
120 Best		Boseman Milling Co.	9.75	2.14	13.34
121 Sun Ray Patent		Bonner Milling Co., Bonner, Mont.	10.94	1.70	10.63
121 Star Clear		Bonner Milling Co., Bonner, Mont.	10.63	1.76	11.00
121 Rose Straight		Bonner Milling Co., Bonner, Mont.	11.23	1.51	11.31
121 Whole Wheat Flour		Boseman Milling Co.	9.58	1.41	8.81

MISCELLANEOUS FOODS FOUND ADULTERATED.

Name of Brand	Name of Manufacturer.	Where Manufactured.	Preservative.
1367 Rex Pork and Beans with Tomato Sauce	Cudahy Canning Co.	South Omaha, Neb.	Saltyle.
1368 Veal Loaf	Lobby, McNeil & Lobby	Chicago, Ill.	Boric Acid.
1369 Durkee's Salad Dressing	E. R. Durkee & Co.	New York.	Saltyle.
1370 Devilled Crab	Tangler Packing Co.	Crisfield, Md.	Boric Acid.
1371 Devilled Ham	Underwood Co.	Boston, Mass.	Boric Acid.
1372 Canned Corned Beef	Lobby, McNeil & Lobby	Chicago, Ill.	Boric Acid.
1373 Heinz's Baked Beans with Tomato Sauce	H. J. Heinz & Co.	Pittsburg, Pa.	Saltyle.
1374 Gold Brand Sweet Potatoes	Batesville Canning Co.	Batesville, Miss.	Saltyle.
1375 Breck's Grape Juice	F. A. Breck	Vineand, N. J.	Saltyle.
1376 Monarch Tomato Picnic Sauce Baked Beans	Ridd, Murdoch & Co.	Chicago, Ill.	Saltyle.
1377 Choice Selected Beans with Tomato Sauce	H. J. Heinz & Co.	Pittsburg, U. S. A.	Saltyle.
1378 Boston Baked Beans	Grocers Packing Co.	Boston, Mass.	Saltyle.
1379 Club House Brand	Franklin MacVeagh & Co.	Chicago, Ill.	Saltyle.
1380 Monarch Brand, Extra Salmon Soup	Ridd, Murdoch & Co.	Chicago, Ill.	Boric Acid.
1381 Red Letter Concentrated Consomme	The Mullen-Blackledge Co.	Indianapolis, Ind.	Boric Acid.

MISCELLANEOUS FOODS NOT FOUND ADULTERATED.

1382 Oysters, Best Quality	Steele-Weddes Co.	Chicago, Ill.	
1383 White Label Clear Consomme	Armour Packing Co.	Kansas City, Mo.	
1384 Yacht Club Salad Dressing	Tildesley & Co.	Chicago, Ill.	
1385 Pork and Beans	Franklin MacVeagh & Co.	Chicago, Ill.	
1386 Eagle Condensed Mince Meat	Franklin MacVeagh & Co.	Chicago, Ill.	
1387 Undermonted Grape Juice	Sanitarium Health Food Co.	Battle Creek, Mich.	
1388 Sanitarium Brand Nut Seasoned Baked Beans with Tomato Sauce	Sanitarium Health Food Co.	Battle Creek, Mich.	
1389 Sanitarium Brand Nut seasoned Baked Beans with Tomato Sauce	Sanitarium Health Food Co.	Battle Creek, Mich.	
1390 Pioneer Brand, Minced Sea Clams	Sea Beach Pickling Works	Warrenton, Oregon.	
1391 Nuttoso	Sanitas Nut Food Co., S.M.	Battle Creek, Mich.	
1392 Monarch Brand Extra Oysters	Ridd, Murdoch & Co.	Chicago, Ill.	
1393 Gopher Brand Extra Selected Succotash	Foley Bros. & Kelley Mar. Co.	St. Paul, Minn.	
1394 Club House Brand Extra Selected Oysters	Franklin MacVeagh & Co.	Chicago, Ill.	

ANALYSIS OF VINEGARS.

Lab. No.	Manufacturers.	Place of Manufacture.	Selling Price Per Gal.	Sulphates.	Chlorides.	Coloring Matter.	Per Cent. Solids.	Per Cent. Ash.	Ash Alk. or Neut. Alk.	Flame.	Sold as—	Per Cent. Acetic Acid.	Remarks.
1623	F. C. Johnson	Kishwaukee, Ill.	50	None	None	None	1.9	.25	Alk.	Pot.	Cider Vin.	5.55	Is an apple cider vinegar.
1624	F. C. Johnson	Kishwaukee, Ill.	50	Trace	None	None	2.92	.46	Alk.	Pot.	Ap. Cider Vin.	6.15	Is an apple cider vinegar.
1625	F. C. Johnson	Kishwaukee, Ill.	50	None	Trace	None	2.23	.26	Alk.	Pot.	Cider Vin.	3.2	Is diluted apple cider vinegar.
1626	F. C. Johnson	Kishwaukee, Ill.	50	Trace	None	None	2.90	.44	Alk.	Pot.	Cider Vin.	5.55	Is an apple cider vinegar.
1627	H. J. Heins & Co.	Pittsburg, Pa.	50	Trace	Trace	None	.16	.03	Alk.	Pot. & Sod	Pickling Vin.	5.45	Is a malt vinegar.
1628	Smith Refining Works	Council Bluffs, Ia.	35	None	None	Caramel	.351	.021	Alk.	Pot. & Sod	Common Vin.	9.60	Probably an acid vinegar.
1629	Smith Refining Works	Council Bluffs, Ia.	35	Trace	None	Caramel	.33	.03	Alk.	Pot. & Sod	Weakened Vin.	4.75	Probably an acid vinegar.
1630	A. Steinhorst	Did not know	40	None	None	Caramel	.25	.05	Alk.	Pot. & Sod	Cider Vin.	5.50	Probably a malt vinegar.
1631	Could not obtain	Did not know	40	None	None	Caramel	.23	.05	Alk.	Pot. & Sod	Cider Vin.	3.70	Probably a malt vinegar.
1632	.....	.....	1.50	Trace	None	None	2.78	.46	Alk.	Pot.	Not sold.	1.4	An apple cider vinegar.
1633	Cross & Blackwell	Vienna and Phila.	3.06	None	None	Caramel	3.06	.23	Alk.	Pot. & Sod	Malt.	4.92	Sold in qt. bot. pure malt vin.
1634	Wallace & Gregory Bros.	Paducah, Ky.	.39	None	None	Caramel	.39	.03	Alk.	Pot. & Sod	Cider Vin.	7.25	Without doubt a malt vinegar.
1635	Wallace & Gregory Bros.	Paducah, Ky.	40	None	None	Caramel	.38	.03	Alk.	Pot. & Sod	Cider Vin.	2.35	Without doubt a malt vinegar.
1636	Wallace & Gregory Bros.	Paducah, Ky.	40	None	None	Caramel	.38	.03	Alk.	Pot. & Sod	Cider Vin.	4.9	Without doubt a malt vinegar.
1637	Wallace & Gregory Bros.	Paducah, Ky.	50	Trace	None	Caramel	.33	.03	Alk.	Pot. & Sod	Cider Vin.	9.00	Without doubt a malt vinegar.
1638	Wallace & Gregory Bros.	Paducah, Ky.	50	Trace	None	Caramel	.27	.07	Alk.	Pot. & Sod	Cider Vin.	6.30	Without doubt a malt vinegar.
1639	Wallace & Gregory Bros.	Paducah, Ky.	50	None	None	Caramel	.229	.018	Alk.	Pot. & Sod	Cider Vin.	7.25	Without doubt a malt vinegar.
1640	Wallace & Gregory Bros.	Paducah, Ky.	50	None	None	Caramel	.176	.014	Alk.	Pot. & Sod	Cider Vin.	4.75	Without doubt a malt vinegar.
1641	Wallace & Gregory Bros.	Paducah, Ky.	50	Trace	None	Caramel	1.00	.23	Alk.	Pot. & Sod	Cider Vin.	4.70	Without doubt a malt vinegar.
1642	Wallace & Gregory Bros.	Paducah, Ky.	50	Trace	Trace	Caramel	.68	.29	Alk.	Pot. & Sod	Ap. Cider Vin.	3.25	Without doubt a malt vinegar.
1643	Wallace & Gregory Bros.	Paducah, Ky.	40	Trace	None	Caramel	.30	.04	Alk.	Pot. & Sod	Ap. Cider Vin.	4.75	Without doubt a malt vinegar.
1644	Wallace & Gregory Bros.	Paducah, Ky.	35	None	None	Caramel	.35	.02	Alk.	Pot. & Sod	Ap. Cider Vin.	4.55	Without doubt a malt vinegar.
1645	Wallace & Gregory Bros.	Paducah, Ky.	35	None	None	Caramel	.19	.02	Alk.	Pot. & Sod	White Wine V.	5.9	Prob. a vin. made from glucose
1646	Wallace & Gregory Bros.	Paducah, Ky.	.....	None	None	None	.14	.07	Alk.	Pot. & Sod	White Wine V.	4.25	Prob. a vin. made from glucose
1647	Wallace & Gregory Bros.	Paducah, Ky.	.....	None	None	None	.21	.07	Alk.	Pot. & Sod	White Wine V.	4.25	Prob. a vin. made from glucose
1648	F. C. Johnson	Kishwaukee, Ill.	.....	None	None	None	1.47	.50	Alk.	Pot.	Ap. Cider Vin.	5.55	An apple cider vinegar.
1649	Wallace & Gregory Bros. (Sample Jugs)	Paducah, Ky.	.....	Trace	None	None	2.30	.32	Alk.	Pot.	Given as Ap. C.	4.55	An apple cider vinegar.

* Refused.

THE PRECINCT ELECTION RETURNS OF THE STATE OF MONTANA FOR THE ELECTION HELD NOVEMBER 6, 1900.

OFFICIAL ELECTION RETURNS FOR BEAVERHEAD COUNTY, FOR ELECTION HELD NOVEMBER 6TH, 1900.

PRECINCTS.	President.		Mem. of Congress.		Governor.	Lieut. Governor.		Sec. of State.	Attorney General.		Treasurer.		Auditor.								
	McKinley, r.....	Bryan, f-d.....	Edwards, f-d..	Murray, r.....		Kelley, l-d....	Toole, f-d....		Folsom, r.....	Hogan, l-d....	Higgins, f-d....	Bennett, r.....	Marion, l-d....	Haye, i. and f-d..	Yoder, r.....	Donovan, f-p....	Porter, r.....	Stewart, l-d....	Barret, f-d....	Edwards, r.....	Livingston, l-d..	Calderhead, -f.p..	Proctor, r.....
Argenta.....	15	20	19	16	1	21	13	1	20	14	14	19	16	18	15	15	20	14	19	15	15
Bannack.....	68	66	63	67	1	68	66	6	12	66	66	66	67	66	67	67	64	68	68	67	67
Barrett.....	6	15	13	6	1	13	6	7	1	6	1	14	4	4	4	4	4	4	4	4	4
Blacktail.....	36	32	34	33	8	36	32	3	35	35	35	31	38	35	35	36	37	35	35	35	35
Bishop.....	17	21	21	16	.....	21	16	.....	21	21	21	21	21	21	21	21	21	21	21	21	21
Black Creek.....	35	31	31	34	.....	31	31	.....	31	31	31	31	31	31	31	31	31	31	31	31	31
Birch Creek.....	12	17	17	14	.....	17	12	.....	17	17	17	17	17	17	17	17	17	17	17	17	17
Big Hole B.....	12	17	17	14	.....	17	12	.....	17	17	17	17	17	17	17	17	17	17	17	17	17
Big Hole B.....	12	17	17	14	.....	17	12	.....	17	17	17	17	17	17	17	17	17	17	17	17	17
Dewey's.....	18	18	18	18	.....	18	18	.....	18	18	18	18	18	18	18	18	18	18	18	18	18
Dillon.....	27	24	24	24	.....	27	27	.....	27	27	27	27	27	27	27	27	27	27	27	27	27
Ellis.....	23	24	24	24	13	23	23	39	1	32	39	1	33	39	39	40	1	30	39	1	30
Glendale.....	61	77	69	64	1	75	49	.....	71	71	60	69	62	60	62	62	72	69	7	69	69
Hecla.....	12	12	12	12	.....	12	12	.....	12	12	12	12	12	12	12	12	12	12	12	12	12
Hog Lake.....	23	23	24	23	1	28	17	.....	27	27	27	18	27	27	27	27	27	27	18	27	27
Lima.....	64	64	64	64	.....	64	64	.....	64	64	64	64	64	64	64	64	64	64	64	64	64
Pioneer.....	2	2	2	2	.....	2	2	.....	2	2	2	2	2	2	2	2	2	2	2	2	2
Polaris.....	16	22	22	21	.....	20	20	.....	20	20	19	19	22	19	22	20	16	22	22	20	20
Redrock.....	19	19	19	19	.....	20	19	.....	20	20	19	19	22	19	22	20	16	22	22	20	20
Big Hole B.....	43	43	43	43	.....	43	43	.....	43	43	42	42	43	42	43	43	40	43	43	43	43
Horse Prairie.....	30	30	30	30	.....	35	35	.....	36	36	35	35	37	36	36	36	35	37	37	36	36
Totals.....	707	937	878	753	27	837	729	29	902	749	27	916	753	881	750	27	896	745	28	852	749
Pluralities.....	.....	170	126	.....	.....	131	.....	.....	133	.....	.....	143	.....	131	.....	.....	151	.....	114	.....	.....

SEVENTH ANNUAL REPORT OF BUREAU

BEAVERHEAD COUNTY—Continued.

[illegible]

BEAVERHEAD COUNTY—Continued.

PRECINCTS.	Clerk and Recorder.		Assessor.		County Attorney.		Supt. of Schools.		Administrator.		Coroner.		Surveyor.		County Commissioners.	
Argenta.....	14	31	13	23	17	15	20	36	36	20	20	24	18	17	16	13
Bannack.....	61	71	57	72	69	74	57	60	71	66	66	68	66	62	78	69
Barrett.....	12	11	11	11	13	13	13	12	4	4	4	12	12	12	6	6
Blacktail.....	21	28	28	40	23	23	29	29	37	36	36	33	33	30	36	36
Blackhawk.....	24	12	17	30	17	17	21	16	21	21	21	22	22	21	21	21
Bishop.....	20	12	18	30	17	17	21	16	24	24	24	23	23	23	23	23
Birch Creek.....	26	21	18	18	23	23	23	21	15	15	15	13	13	13	13	13
Big Hole 15.....	62	21	15	15	40	40	40	40	30	30	30	33	33	30	49	61
Dewey.....	35	21	27	44	37	37	37	28	43	43	43	39	39	36	64	86
Dell.....	38	27	27	28	24	24	27	28	23	23	23	26	26	24	56	56
Dillon.....	39	24	24	28	24	24	27	28	23	23	23	26	26	24	56	56
Jackson.....	73	47	55	66	67	67	69	67	63	63	63	70	70	65	86	86
Glendale.....	36	17	17	14	14	14	14	14	14	14	14	13	13	13	14	14
Hecla.....	31	23	31	23	23	23	23	23	19	19	19	23	23	23	32	32
Lama.....	70	70	69	64	67	67	64	67	71	71	71	63	63	64	66	66
Pioneer.....	6	6	6	6	6	6	6	6	8	8	8	11	11	10	10	10
Polaris.....	24	24	20	23	17	17	17	20	19	19	19	20	20	19	25	25
Red Rock.....	29	29	25	25	29	29	29	26	20	20	20	27	27	26	30	30
Big Hole 16.....	69	69	64	64	63	63	64	65	44	44	44	70	70	61	69	69
Horse Prairie.....	33	30	32	30	23	23	36	36	27	27	27	36	36	32	51	51
Total.....	914	755	809	885	900	774	916	893	781	889	775	974	880	877	804	770
Precincts.....	159	.....	.....	55	136	.....	160	135	.....	114	.....	.....	.....	33	.....	.....

BROADWATER COUNTY—Continued.

PRECINCTS.	Sept. of Schools.			Associate Justice Supreme Court.			Members Legislature.						Judges of District.		Clerk District Court.			Sheriff.		
	Leamy	Harmon	Welsh	Milburn	Von Tobel	Word, I.-d....	Cannon, f.-d....	Rossman, f.-d....	McKnight, r....	Rotwitt, r....	Reed, I.-d.....	Wilder, I.-d....	Armstrong, d....	Holloway, r.....	Bubeer, d....	Combs, r....	Hardy, I.-d....	Poole, f.-d....	Starkweather, r....	Perkins, I.-d....
Townsend.....	175	96	15	172	95	21	111	147	166	94	44	9	176	115	169	131	14	177	165	25
Diamond.....	36	10	10	30	11	1	38	28	21	13	1	3	32	10	28	14	29	29	10	4
Hamel.....	30	20	20	35	27	5	22	29	35	22	1	1	22	29	35	27	34	24	25	6
Glenwood.....	14	8	8	14	5	6	14	10	7	4	3	0	12	6	12	6	15	15	3	19
Toston.....	22	24	24	28	27	6	35	39	39	32	4	1	33	13	35	26	27	27	15	2
Stadensburg.....	42	34	34	43	34	6	37	40	43	32	6	1	41	39	43	30	42	45	33	2
Winston.....	49	40	40	48	45	7	57	57	45	29	30	5	58	48	52	42	33	39	38	10
Blackwell.....	31	24	24	32	26	6	106	87	45	29	30	1	84	61	79	62	1	115	32	1
R. P. Mine.....	9	1	1	10	1	6	9	8	1	1	1	1	10	1	11	7	1	9	1	2
Lombard.....	14	6	6	16	6	2	21	15	4	5	1	1	12	2	11	2	1	1	5	...
Jefferson River.....	1	2	2	1	1	1	6	6	7	7	...	...	6	8	8	9	...	8	9	...
Total.....	617	386	386	630	354	45	433	601	387	263	76	23	534	327	404	369	8	660	325	70
Pluralities.....	222	...	...	236	...	...	95	114	...	...	...	...	187	...	115	...	...	276	...	...

CARBON COUNTY—Continued.

PRECINCTS.	Associate Jus- tices Supreme Court.		Judges 4th Judicial District.		State Senator.		Members of Legislature.		Clerk Dist. Court		Sheriff.		Treasurer.		Clerk and Recorder.							
	Von Tobel, r.	Word, i-d.	Henry, d.	Poorman, r.	Emmons, f-p....	Meyer, r.	Talmadge, i-d....	Pollard, f-d....	Gregory, r.	Semonsen, i-d	Whittington, f-p.	Esselstyn, r.	Muehbach, i-d. .	Dougherty, f-p..	Potter, r.	Dunn, i-d.	Deegan, i-d.	Wright, r.	Pryde, i-d.	Spears, f-d....	Smith, r.	Beeman, i-d.
Rockvale.	56	60	11	12	48	53	40	13	52	13	47	54	18	38	46	32	49	56	9	43	56	15
Joliet.	43	64	8	9	69	55	19	13	51	15	33	50	20	33	43	48	39	74	7	25	74	10
Bridge.	108	70	2	3	49	68	12	9	67	16	128	84	31	33	94	15	39	72	3	35	72	10
Reno.	23	27	27	28	35	26	3	1	26	1	18	27	11	8	29	27	15	30	8	37	29	2
Roberts.	21	67	18	20	60	68	28	26	36	14	16	73	20	80	62	19	35	73	20	39	69	15
East Red Lodge	103	164	207	143	169	127	92	125	138	69	83	167	117	103	90	108	109	151	87	109	169	46
West Red Lodge	65	67	29	123	66	69	51	77	65	27	44	79	35	16	32	38	35	79	5	23	32	13
Jackson	22	22	33	33	33	18	43	23	40	7	17	35	25	14	21	26	16	48	3	22	32	14
Fishall	22	23	13	37	32	15	20	19	23	19	19	30	18	11	40	16	10	68	3	12	45	5
Morris.	14	41	5	37	26	35	61	28	54	28	39	58	26	35	66	37	36	77	10	36	60	13
Abasakee.	49	68	15	60	36	61	4	9	1	1	11	3	2	9	10	4	8	10	3	6	2	2
Bowler.	11	7	8	12	10	76	4	2	7	2	63	69	39	39	70	9	53	69	21	63	74	13
Carbonado.	66	71	8	63	63	76	12	67	78	14	46	87	15	123	83	31	53	69	16	68	54	20
Gebo.	67	68	19	72	60	76	21	60	99	14	46	87	15	49	51	31	53	77	16	68	54	20
Totals.	711	810	226	1044	763	702	226	729	330	344	571	524	416	643	734	447	633	916	243	664	814	333
Pluralities	...	...	...	...	...	134	...	...	101	...	...	283	...	...	141	...	...	253	...	...	160	...

OFFICIAL ELECTION RETURNS FOR CASCADE COUNTY, FOR ELECTION HELD NOVEMBER 6, 1900.

PRECINCTS.	President.			For Congress.			Governor.			Lieut. Governor.			Secretary of State.			Attorney General.			Treasurer.			Auditor.		
	McKinley, r....	Bryan, f.-d....	Edwards, f.-p....	Murray, r....	Kelley, l.-d....	Toole, f.-d....	Folsom, r....	Hogan, l.-d....	Higgins, f.-d....	Bennett, r....	Marion, l.-d....	Hays, l. and f.-d..	Yoder, r....	Donovan, f.-p....	Porter, r....	Stewart, l.-d....	Barret, f.-d....	Edwards, r....	Livingston, l.-d....	Calderhead, f.-p....	Proctor, r....	McLean, l.-d....		
Great Falls, 1st ward.....	146	223	193	136	23	246	113	22	236	121	18	228	123	204	143	143	211	132	115	129	178	10		
Great Falls, 2nd ward.....	74	127	126	70	7	130	70	8	118	68	6	228	68	109	78	78	105	132	115	129	178	6		
Great Falls, 3rd ward.....	143	236	235	134	19	253	141	17	147	138	15	231	135	169	147	147	105	135	115	129	178	14		
Great Falls, 4th ward.....	367	356	356	356	23	439	329	31	398	377	3	413	347	569	365	365	274	243	233	243	408	15		
Great Falls, B. & M. Smelter.....	60	27	31	73	4	24	73	4	22	75	2	62	75	23	76	76	2	2	2	2	2	2		
Great Falls, Silver Smelter.....	32	48	57	14	4	68	11	1	45	28	2	45	27	29	13	28	2	2	2	2	2	2		
Great Falls, Boston Heights.....	32	48	57	14	4	68	11	1	45	28	2	45	27	29	13	28	2	2	2	2	2	2		
West Great Falls.....	52	108	114	72	4	117	72	6	14	72	3	117	72	122	52	52	112	82	82	107	307	2		
Ulm.....	6	8	7	2	7	8	6	...	...	...	...	...	...	6	7	7	7	6	6	...	...	...		
Run River.....	26	23	23	23	...	26	22	...	23	24	...	21	23	21	25	25	23	24	24	29	29	...		
Mission.....	24	23	23	23	...	26	22	...	23	24	...	21	23	21	25	25	23	24	24	29	29	...		
Hardy.....	12	16	16	16	...	19	13	...	16	13	...	16	13	17	13	13	15	13	13	16	16	...		
Cascade.....	72	92	88	79	3	92	74	3	87	90	8	88	76	81	79	79	3	80	80	86	86	...		
Adel.....	9	23	23	23	...	23	9	...	23	23	...	23	23	23	23	23	23	23	23	23	23	...		
Barker.....	12	40	36	11	...	43	9	...	40	10	...	37	15	23	16	16	10	10	10	10	10	...		
Milligan.....	16	9	9	9	...	11	14	...	10	14	...	11	15	10	15	15	10	10	10	10	10	...		
Orr.....	24	11	11	24	...	13	23	...	13	23	...	11	23	10	23	23	14	14	14	14	14	...		
Truly.....	18	11	11	11	...	13	23	...	13	23	...	11	23	10	23	23	14	14	14	14	14	...		
Red Butte.....	24	8	8	24	...	17	14	...	13	15	...	11	15	11	15	15	11	11	11	11	11	...		
Field.....	24	8	8	24	...	17	14	...	13	15	...	11	15	11	15	15	11	11	11	11	11	...		
Grand Coulee.....	31	16	16	31	...	27	23	...	29	21	...	16	27	14	27	27	14	14	14	14	14	...		
Black Butte.....	75	68	68	74	...	87	73	...	84	76	4	86	74	83	76	76	23	23	23	23	23	...		
Evans.....	23	26	23	23	...	23	23	...	23	23	...	23	23	23	23	23	23	23	23	23	23	...		
Leaning Creek.....	23	23	23	23	...	23	23	...	23	23	...	23	23	23	23	23	23	23	23	23	23	...		
Monarch.....	4	15	15	4	...	16	22	...	14	23	...	15	23	10	23	23	14	14	14	14	14	...		
Riceville.....	8	23	24	10	2	23	10	4	14	4	...	14	4	15	4	4	14	14	14	14	14	...		
Armington.....	25	23	23	25	...	23	23	...	23	23	...	23	23	23	23	23	23	23	23	23	23	...		
West Belt.....	91	118	65	83	3	73	83	63	63	86	50	114	86	66	66	66	63	63	63	63	63	...		
East Belt.....	69	141	69	69	66	66	63	67	78	64	64	128	63	69	72	72	64	64	64	64	64	...		
Willow Creek.....	123	28	38	30	...	38	9	...	14	17	...	14	16	10	19	19	10	10	10	10	10	...		
Cove.....	123	28	38	30	...	38	9	...	14	17	...	14	16	10	19	19	10	10	10	10	10	...		
Kibbey.....	123	28	38	30	...	38	9	...	14	17	...	14	16	10	19	19	10	10	10	10	10	...		
Davis Creek.....	123	28	38	30	...	38	9	...	14	17	...	14	16	10	19	19	10	10	10	10	10	...		
Geyer.....	123	28	38	30	...	38	9	...	14	17	...	14	16	10	19	19	10	10	10	10	10	...		
Nellart.....	123	28	38	30	...	38	9	...	14	17	...	14	16	10	19	19	10	10	10	10	10	...		
Stockert.....	81	94	94	94	...	94	94	...	94	94	...	94	94	94	94	94	94	94	94	94	94	...		
Little Chicago.....	117	117	117	117	...	117	117	...	117	117	...	117	117	117	117	117	117	117	117	117	117	...		

CASCADE COUNTY—Continued.

	President.	For Congress.	Governor.	Lieut. Governor.	Secretary of State.	Attorney General.	Treasurer.	Auditor.
PRECINCTS.								
McLean, l.-d..								
Proctor, r....								
Calderhead, f.-p...								
Livingston, l.-d....								
Edwards, r....								
Barret, f.-d....								
Stewart, l.-d....								
Porter, r.....								
Donovan, f.-p....								
Yoder, r....								
Hays, f.-d....								
Marion, l.-d....								
Bennett, r....								
Higgins, f.-d....								
Hogan, l.-d....								
Folsom, r....								
Toole, f.-d....								
Kelley, l.-d....								
Murray, r.....								
Edwards, f.-p....								
Bryan, d.....								
McKinley, r....								
Snow Creek..								
Little Milwaukee..								
Sunnyside..								
Box Elder..								
Belt Park..								
Dry Wolf..								
Totals								
Pluralities..								

Members of the Legislature.

Judge District Court.

Assoc. Justice Supreme Court.

Superintendent of Schools.

Rush, l.-d....	.....	.....	.....	.....	.....	.....	.....	.....
Stork, l.-d....	.....	.....	.....	.....	.....	.....	.....	.....
C. F. Murphy, l.-d..	.....	.....	.....	.....	.....	.....	.....	.....
Coombs, r....	.....	.....	.....	.....	.....	.....	.....	.....
Pittwood, r....	.....	.....	.....	.....	.....	.....	.....	.....
Stockett, r....	.....	.....	.....	.....	.....	.....	.....	.....
Elliott, r....	.....	.....	.....	.....	.....	.....	.....	.....
Clingan, r....	.....	.....	.....	.....	.....	.....	.....	.....
Jensen, f.-p....	.....	.....	.....	.....	.....	.....	.....	.....
Connor, f.-l....	.....	.....	.....	.....	.....	.....	.....	.....
Richardson, f.-p....	.....	.....	.....	.....	.....	.....	.....	.....
Wood, f.-d....	.....	.....	.....	.....	.....	.....	.....	.....
Thoroughman, f.-d	.....	.....	.....	.....	.....	.....	.....	.....
Berry, r....	.....	.....	.....	.....	.....	.....	.....	.....
Leslie, f.-d....	.....	.....	.....	.....	.....	.....	.....	.....
Word, l.-d....	.....	.....	.....	.....	.....	.....	.....	.....
Von Tobel, r....	.....	.....	.....	.....	.....	.....	.....	.....
Milburn, f.-d....	.....	.....	.....	.....	.....	.....	.....	.....
Leamy, l.-d....	.....	.....	.....	.....	.....	.....	.....	.....
Harmon, r....	.....	.....	.....	.....	.....	.....	.....	.....
Welsh, f.-l....	.....	.....	.....	.....	.....	.....	.....	.....
Great Falls, 1st ward....	.....	.....	.....	.....	.....	.....	.....	.....
Great Falls, 2nd ward....	.....	.....	.....	.....	.....	.....	.....	.....
Great Falls, 3rd ward....	.....	.....	.....	.....	.....	.....	.....	.....
Great Falls, 4th ward....	.....	.....	.....	.....	.....	.....	.....	.....
Great Falls, B. & M. Smelter	.....	.....	.....	.....	.....	.....	.....	.....
Great Falls, Silver Smelter	.....	.....	.....	.....	.....	.....	.....	.....
West Great Falls..	.....	.....	.....	.....	.....	.....	.....	.....
Ulm..	.....	.....	.....	.....	.....	.....	.....	.....
Sun River..	.....	.....	.....	.....	.....	.....	.....	.....
Mission..	.....	.....	.....	.....	.....	.....	.....	.....

PRECINCTS.

CASCADE COUNTY—Continued.

PRECINCTS.	Superintendent of Schools.		Assoc. Justice Supreme Court.		Judge District Court.		Members of the Legislature.	
	1897	1898	1897	1898	1897	1898	1897	1898
Hardy	16	13	16	13	13	13	13	13
Cascade	80	78	87	77	88	80	86	80
Adel.	22	9	23	9	24	24	23	24
Barker	30	16	32	12	33	33	32	33
MIHgan	9	15	9	15	10	11	11	11
Oru	11	24	11	24	11	11	11	11
Truly	14	17	15	16	15	17	17	17
Red Butte	20	21	20	21	21	21	21	21
Field	20	21	20	21	21	21	21	21
Sand Coulee	21	27	21	27	22	22	22	22
Black Butte	22	27	22	27	23	23	23	23
Evans	22	27	22	27	23	23	23	23
Logging Creek	13	25	14	25	14	14	14	14
Monarch	14	24	15	24	15	15	15	15
Riceville	24	12	24	12	24	24	24	24
Armington	27	24	27	24	28	28	28	28
West Belt	61	63	61	63	62	62	62	62
East Belt	63	63	63	63	64	64	64	64
Willow Creek	38	10	38	10	38	38	38	38
Core	12	16	12	16	12	12	12	12
Kibbey	45	32	45	32	45	45	45	45
David Creek	16	16	16	16	16	16	16	16
Geyer	15	15	15	15	15	15	15	15
Stearns	149	43	150	43	151	151	151	151
Stearns	149	43	150	43	151	151	151	151
Little Chicago	41	112	41	112	41	41	41	41
Snow Creek	8	1	8	1	8	8	8	8
Little Milwaukee	9	62	9	62	9	9	9	9
Sunayside	21	25	21	25	21	21	21	21
Box Elder	16	8	16	8	16	16	16	16
Bel Part	6	12	6	12	6	6	6	6
Dry Wolf	227	197	227	197	227	227	227	227
Totals	240	261	240	261	240	240	240	240

SEVENTH ANNUAL REPORT OF BUREAU

CASCADE COUNTY—Continued.

Members Legislature	Clerk Court	Sheriff	Treas.	Clerk and Recorder		Assessor.	County Attorney	Supt. of Schools	Adminis- trator.	Coroner.
Wm. Murphy, l.-d..		Athey, r....								
Phelan, l.-d.....		Benner, f.-d....								
		Reynolds, r....								
		Wadsworth, f.-d....								
		Molt, r.....								
		Fortune, f.-d....								
		Mullery, r....								
		Merkle, l.-d								
		Josslyn.....								
		McGriffin....								
		Payne								
		Gornley								
		Largent								
		Mrs. Kearns								
		Cureton								
		Hanson								
		Gillespie								
		Sweeney								
		Fairfield								
		Brady								
Geyer..	1	9	17	14	37	19	11	15	39	15
Nelhart	15	135	173	36	103	63	17	138	129	44
Stookett.		100	83	93	93	101	44	91	84	94
Little Chicago.	4	47	114	44	109	42	109	43	108	108
Snow Creek.	6	7	2	9	1	4	1	7	8	1
Little Milwaukee.	1	8	61	8	50	8	61	8	61	8
Sunnyside.	3	13	10	6	10	12	11	6	8	6
Box Elder.	4	24	24	26	20	25	7	23	24	19
Belt Park.	4	13	16	8	16	13	8	11	16	8
Dry Wolf.		5	12	5	12	12	1	14	13	13
Totals	349	3774	5201	2009	2248	2022	3213	2421	1911	1763
Majorities	234	600	451	1991	253	185	72	435	383	332

CASCADE COUNTY—Continued.

PRECINCTS.	Surveyor.		Auditor.		County Commissioners.							
	Morton.	Fernch.	Cart.	Cunningham.	Varnum.	Delph.	Neihart.	Roalswch.	Cooper.	Beechly.	Peterson.	Dickinson.
Gt. Falls, 1st wd....	209	153	211	127	28	210	185	198	159	142	135	64
Gt. Falls, 2nd wd....	125	78	114	77	13	124	113	120	96	76	69	17
Gt. Falls, 3rd wd....	241	144	244	136	20	234	219	227	187	147	137	42
Gt. Falls, 4th wd....	70	282	285	214	67	853	333	363	285	364	349	90
Gt. F. B. & M. Smeit.	23	79	19	73	9	22	19	20	23	77	80	8
Gt. Falls, S.H. Smeit.	55	20	60	12	4	56	69	50	20	14	14	9
Gt. Falls, B. Hpts....	38	46	45	32	7	43	39	37	47	38	38	7
West Gt. Falls....	105	87	110	82	4	101	97	104	96	89	87	5
Ulm.....	6	7	10	4		6	7	7	7	8	7	
Sun River.....	21	25	20	27		22	17	12	37	22	25	8
Mission.....	18	35	18	33	1	16	16	17	34	33	33	4
Hardy.....	16	12	16	13		15	13	16	14	14	13	
Cascade.....	94	79	82	76	2	84	84	70	89	81	77	6
Adel.....	21	11	22	10		22	22	24	9	9	9	1
Barker.....	39	12	36	13		46	33	28	7	8	18	2
Milligan.....	8	16	10	14		9	9	8	16	16	14	3
Orr.....	11	22	10	24		13	11	11	20	23	23	
Truly.....	11	21	14	17		12	7	16	16	1	15	10
Red Butte....	29	27	33	20	3	33	26	33	21	29	16	10
Field.....	18	25	18	22	2	13	10	13	25	26	27	7
Sand Coulee....	78	77	64	108	1	80	80	97	69	74	71	2
Black Butte....	25	3	26	26	3	24	19	21	20	20	23	7
Evans.....	36	20	31	24		31	27	33	28	31	21	1
Logging Creek....	14	23	12	24		16	14	12	22	29	23	
Monarch.....	10	7	14	3	1	19	8	6	1	2	2	1
Riceville.....	22	18	23	13	3	25	20	12	3	13	13	3
Armington.....	21	30	21	28	4	37	21	19	22	21	26	5
West Belt.....	100	94	65	106	45	115	63	61	132	83	87	52
East Belt.....	120	82	64	74	60	122	70	75	129	62	64	69
Willow Creek..	29	12	9	9	2	30	28	22	14	9	9	8
Cora.....	9	30	11	16	2	11	12	10	19	17	18	5
Kibbey.....	48	21	42	34	1	60	27	27	19	30	58	1
Davis Creek....	15	17	14	18		16	16	13	15	15	19	
Geyser.....	16	14	10	17	1	14	10	7	15	17	23	1
Neihart.....	167	45	142	61	12	125	180	106	37	33	62	24
Stockett.....	99	39	96	117	2	98	96	102	81	80	84	5
Little Chicago....	43	109	42	109	4	43	40	54	113	114	115	3
Snow Creek....	8	1	7	1		5	8	3			5	1
Little Milwaukee..	8	51	8	60		8	8	8	51	51	51	
Sunnyside.....	8	7	9	8		10	6	7	9	6	6	4
Box Elder.....	20	29	20	23	3	41	26	39	17	21	18	5
Belt Park.....	20	29	20	26	3	41	16	8	7	8	7	1
Dry Wolf.....	6	11	5	18		5	6	5	12	12	11	
Totals.....	2354	2100	2227	1997	294	2411	2122	2118	2162	1969	1990	490
Pluralities.....	254		230									

Note.—A contest instituted, for a recount, between Roalswch and Neihart, resulted in the election of Roalswch.

OFFICIAL ELECTION RETURNS FOR CHOTEAU COUNTY, FOR ELECTION HELD NOVEMBER 6, 1900.

PRECINCTS.	President.		For Congress.		Governor.		Lieut. Governor.		Secretary of State.		Attorney General.		Treasurer.		Auditor.							
	McKinley, r.	Bryan, d.	Edwards, f.-p.	Murray, r.	Kelley, l.-d.	Toole, f.-d.	Folsom, r.	Hogan, l.-d.	Higgins, f.-d.	Bennett, r.	Marion, l.-d.	Hays, f.-d.	Yoder, r.	Donovan, f.-p.	Porter, r.	Stewart, l.-d.	Barret, f.-d.	Edawrds, r.	Livingston, l.-d.	Calderhead, f.-p.	Proctor, r.	McLean, l.-d.
Harlem	83	30	29	86	32	32	16	1	29	84	1	29	84	28	85	1	25	88	26	26	26	1
Lodson	18	8	7	14	7	18	18	15	12	15	15	14	13	15	19	19	12	14	14	13	13	14
Landusky	26	13	13	23	13	23	23	22	12	20	22	14	20	15	21	21	12	24	24	23	23	23
Chinook	174	94	97	172	114	114	100	4	98	168	4	98	167	95	167	4	93	163	93	90	90	166
Lower Clear Creek	12	4	4	13	5	12	12	13	4	12	4	13	4	4	12	4	4	11	4	4	11	4
Lloyd	41	13	12	44	15	41	41	14	14	40	13	13	43	14	42	42	14	42	42	13	42	41
Cleveland	37	6	7	43	15	33	33	7	7	40	10	6	37	7	40	40	4	42	4	4	41	41
Warwick	29	8	8	29	11	28	28	11	11	28	11	11	27	10	28	1	11	27	11	11	27	27
Egan	11	4	3	8	1	6	6	1	4	5	1	3	10	1	3	1	3	9	2	2	10	1
Hayre	138	146	131	132	138	138	130	19	120	135	16	136	138	103	138	20	115	132	132	131	124	12
Big Sandy	51	23	19	50	41	39	39	27	27	45	23	24	46	23	48	48	23	46	23	18	54	54
Box Elder	23	7	7	16	7	16	16	6	6	17	7	7	15	6	17	17	6	25	6	6	17	17
Chesler	37	25	22	40	28	37	37	23	23	38	1	23	39	22	40	40	23	39	30	27	40	40
Gold Butte	37	5	5	23	5	21	21	6	6	27	6	5	27	6	26	26	5	27	5	5	27	27
East Butte	17	5	5	12	6	11	11	6	7	10	10	6	10	4	15	15	5	12	6	6	11	11
Lucille	19	6	6	15	6	13	13	6	6	18	6	6	13	6	14	14	6	14	6	6	15	15
Valleaux	8	6	6	9	7	8	8	9	6	18	9	4	10	4	10	10	4	10	3	3	11	11
Perryburg	172	118	97	162	152	152	16	11	112	162	8	122	151	94	176	8	107	165	94	94	172	7
Ft. Benton	11	9	8	11	11	9	9	11	11	9	9	9	9	8	12	12	7	11	7	24	27	27
Marias	26	27	24	36	1	24	29	1	23	27	2	25	26	24	27	1	25	27	1	24	27	1
Upper Highwood	12	6	6	13	1	7	11	6	6	11	1	15	3	15	11	1	14	11	1	6	11	1
Lower Highwood	5	16	13	4	2	13	3	3	14	3	1	15	3	15	3	3	14	3	1	13	4	1
Shonkin	7	6	6	7	6	7	7	6	6	7	7	6	7	6	7	7	6	7	6	7	6	7
Flagler	25	5	5	25	16	15	15	5	5	26	5	5	25	10	21	21	5	25	5	5	25	25
Phillips	11	3	3	10	2	7	7	5	4	8	2	4	10	3	11	11	5	8	1	2	10	1
Lobby's	13	8	8	11	6	8	8	6	8	10	3	9	9	9	11	11	6	11	8	10	10	10
Upper Shonkin	14	8	7	13	2	9	14	2	5	15	1	1	11	7	13	1	7	14	1	6	14	1
Circle Ranch	12	1	1	11	1	12	12	1	1	11	1	1	11	1	11	1	1	11	1	6	12	1
Bilmont	14	1	1	11	1	13	13	6	6	13	13	6	13	7	13	13	6	14	6	5	14	14
Basin	14	1	1	11	1	13	13	6	6	13	13	6	13	7	13	13	6	14	6	5	14	14
Regard	9	6	6	10	5	11	11	5	5	10	10	5	9	4	10	10	5	10	5	5	10	10
Total	1086	629	561	1070	47	697	1919	54	599	1053	43	621	1020	549	1084	39	563	1067	38	547	1066	31
Pluralties	469			500						454			359		536			505			519	

CHOTEAU COUNTY--Continued.

Superintendent of Schools.	Associate Justice Supreme Court.	Judge 10th Dist.	Members of the Legislature.	Clerk District Court.	Sheriff.	Treasurer.
Welch, f.-l.....	26	4	Stocking, p.....	60	11	16
Harmon, r.....	19	12	Lockwood, r.....	59	16	16
Leamy, l.-d.....	21	87	Smith, d.....	74	8	21
Milburn, f.-d.....	167	161	Howell, r.....	45	126	156
Van Tobel, r.....	4	13	Clary, d.....	1	164	3
Word, l.-d.....	13	4	Campbell, p.....	22	11	3
Word, l.-d.....	4	13	Todd, d.....	68	17	20
Word, l.-d.....	12	4	Boylar, r.....	14	20	109
Word, l.-d.....	6	40	Mack, p.....	1	1	1
Word, l.-d.....	11	28	Basault, p.....	1	1	1
Word, l.-d.....	2	10	Kane, l.-d.....	1	1	1
Word, l.-d.....	121	128	Neubert, l.-d.....	28	1	1
Word, l.-d.....	159	135	Crutcher, d.....	27	11	11
Word, l.-d.....	20	45	Moran, d.....	32	14	14
Word, l.-d.....	4	13	Patterson, r.....	78	10	19
Word, l.-d.....	6	40	Bourne, r.....	138	14	19
Word, l.-d.....	13	4	Chandle, r.....	74	17	17
Word, l.-d.....	2	10	Tattan, d.....	43	17	17
Word, l.-d.....	121	128	Word, l.-d.....	13	4	13
Word, l.-d.....	159	135	Word, l.-d.....	20	45	20
Word, l.-d.....	20	45	Word, l.-d.....	4	13	4
Word, l.-d.....	4	13	Word, l.-d.....	12	4	12
Word, l.-d.....	6	40	Word, l.-d.....	2	10	2
Word, l.-d.....	11	28	Word, l.-d.....	27	11	27
Word, l.-d.....	2	10	Word, l.-d.....	32	14	32
Word, l.-d.....	121	128	Word, l.-d.....	78	10	78
Word, l.-d.....	159	135	Word, l.-d.....	138	14	138
Word, l.-d.....	20	45	Word, l.-d.....	74	17	74
Word, l.-d.....	4	13	Word, l.-d.....	43	17	43
Word, l.-d.....	6	40	Word, l.-d.....	20	45	20
Word, l.-d.....	13	4	Word, l.-d.....	2	10	2
Word, l.-d.....	2	10	Word, l.-d.....	27	11	27
Word, l.-d.....	121	128	Word, l.-d.....	32	14	32
Word, l.-d.....	159	135	Word, l.-d.....	78	10	78
Word, l.-d.....	20	45	Word, l.-d.....	138	14	138
Word, l.-d.....	4	13	Word, l.-d.....	74	17	74
Word, l.-d.....	6	40	Word, l.-d.....	43	17	43
Word, l.-d.....	11	28	Word, l.-d.....	20	45	20
Word, l.-d.....	2	10	Word, l.-d.....	27	11	27
Word, l.-d.....	121	128	Word, l.-d.....	32	14	32
Word, l.-d.....	159	135	Word, l.-d.....	78	10	78
Word, l.-d.....	20	45	Word, l.-d.....	138	14	138
Word, l.-d.....	4	13	Word, l.-d.....	74	17	74
Word, l.-d.....	6	40	Word, l.-d.....	43	17	43
Word, l.-d.....	11	28	Word, l.-d.....	20	45	20
Word, l.-d.....	2	10	Word, l.-d.....	27	11	27
Word, l.-d.....	121	128	Word, l.-d.....	32	14	32
Word, l.-d.....	159	135	Word, l.-d.....	78	10	78
Word, l.-d.....	20	45	Word, l.-d.....	138	14	138
Word, l.-d.....	4	13	Word, l.-d.....	74	17	74
Word, l.-d.....	6	40	Word, l.-d.....	43	17	43
Word, l.-d.....	11	28	Word, l.-d.....	20	45	20
Word, l.-d.....	2	10	Word, l.-d.....	27	11	27
Word, l.-d.....	121	128	Word, l.-d.....	32	14	32
Word, l.-d.....	159	135	Word, l.-d.....	78	10	78
Word, l.-d.....	20	45	Word, l.-d.....	138	14	138
Word, l.-d.....	4	13	Word, l.-d.....	74	17	74
Word, l.-d.....	6	40	Word, l.-d.....	43	17	43
Word, l.-d.....	11	28	Word, l.-d.....	20	45	20
Word, l.-d.....	2	10	Word, l.-d.....	27	11	27
Word, l.-d.....	121	128	Word, l.-d.....	32	14	32
Word, l.-d.....	159	135	Word, l.-d.....	78	10	78
Word, l.-d.....	20	45	Word, l.-d.....	138	14	138
Word, l.-d.....	4	13	Word, l.-d.....	74	17	74

PRECINCTS:

CHOTEAU COUNTY—Continued.

PRECINCTS.	Clerk, Recorder	Assessor.	Co. Att'y	Supt. Schools	Administrator.		Coroner.	Surveyor.	County Commissioners.							
Harlem	94	26	83	11	2	84	88	57	30	46	29	75	62	97	37	1
Ladson	13	4	19	4	1	12	12	15	5	8	7	9	8	17	17	2
Ladusky	28	11	22	2	1	12	25	16	15	35	11	23	12	30	20	3
Chinook	130	116	143	36	3	163	205	62	59	74	177	157	146	111	11	1
Lower Clear Creek	14	7	10	4	1	41	35	5	12	1	1	5	12	40	35	1
Lloyd	49	13	41	14	28	41	44	13	18	10	15	25	40	35	25	1
Cleveland	46	13	35	40	29	38	41	41	49	16	23	35	43	35	25	1
Warwick	23	16	21	27	16	24	26	14	21	9	14	20	23	23	10	1
Egan	15	2	13	13	12	1	1	6	8	7	4	8	7	10	1	1
Have	164	96	151	149	166	111	123	114	207	93	146	71	75	124	13	1
Big Sandy	67	23	43	25	45	45	44	32	40	19	37	43	43	34	28	1
Box Elder	28	7	18	18	22	13	18	15	16	13	6	17	17	13	12	1
Chester	17	5	15	16	1	23	23	22	1	8	5	5	5	12	12	1
Gold Butte	19	21	40	40	41	38	1	22	28	34	23	42	40	24	1	1
East Butte	27	3	28	1	26	1	25	6	11	4	6	6	15	13	14	1
LaCelle	15	3	16	13	15	15	15	4	15	4	3	4	15	13	14	1
Valleaux	30	4	22	20	15	15	15	6	14	4	6	4	20	13	14	1
Perrisburg	11	2	13	13	9	13	13	3	4	3	11	11	11	14	8	1
Pt. Penion	209	56	235	235	185	205	174	105	151	78	112	154	114	143	41	1
Maras	15	2	15	15	6	13	13	6	9	15	6	7	8	11	4	1
Upper Highwood	39	16	35	34	29	34	32	26	25	17	16	28	31	26	1	1
Lower Highwood	12	6	10	11	1	12	11	4	6	5	3	13	11	11	3	1
Shonkin	10	8	13	12	7	6	6	14	14	11	9	7	6	4	1	1
Flagler	10	10	10	11	7	9	8	6	6	5	4	8	8	6	1	1
Phillips	27	5	24	24	26	24	24	24	24	18	18	23	18	24	1	1
Libby's	12	3	10	10	9	10	10	8	3	3	3	10	7	19	1	1
Upper Shonkin	17	4	16	15	6	13	12	9	6	10	10	13	13	12	1	1
Circle Ranch	16	4	13	14	9	14	12	5	10	6	10	13	15	15	14	1
Belmont	12	3	11	11	11	11	11	10	10	1	1	11	15	11	1	1
Basin	15	3	10	11	12	12	15	13	7	35	3	14	7	11	1	1
Ragland	14	2	14	11	13	8	15	7	3	3	3	14	7	11	1	1
Total	1243	36	490	1155	1005	3079	1140	600	763	435	703	378	347	591	71	1
Pluralities			665	121	623	1129	1129	17	371	215	215	215	84	228		1

OFFICIAL ELECTION RETURNS FOR CUSTER COUNTY, FOR ELECTION HELD NOVEMBER 6, 1900.

	Presi- dent.	Congress	Governor.	Lieut. Gov.	Sec'y of State	Atty Gen.	Treas.	Auditor.	Supt. of Schools.	Asso. Just's Supr. Dist.	Just's Court Dist.	State Senator.	U. S. Rep.
Miles City.....	288	170	183	274	8	23	259	2	157	278	3	158	4
Hethaway.....	10	5	6	11	7	12	1	151	6	8	11	250	9
Sadie.....	11	8	9	10	11	12	13	14	15	16	17	18	19
Hermann's.....	2	3	4	5	6	7	8	9	10	11	12	13	14
Reebe.....	20	13	14	15	16	17	18	19	20	21	22	23	24
Gov't Saw Mill.....	25	18	19	20	21	22	23	24	25	26	27	28	29
Rosebud.....	13	9	10	11	12	13	14	15	16	17	18	19	20
Butte School House.....	108	70	69	112	1	2	3	4	5	6	7	8	9
Forsyth.....	9	4	5	6	7	8	9	10	11	12	13	14	15
Howard.....	20	12	13	14	15	16	17	18	19	20	21	22	23
Rancher.....	4	3	4	5	6	7	8	9	10	11	12	13	14
Blatchford.....	63	11	12	13	14	15	16	17	18	19	20	21	22
Terry.....	7	2	3	4	5	6	7	8	9	10	11	12	13
Fallon.....	8	4	5	6	7	8	9	10	11	12	13	14	15
T. D. Ranch.....	9	4	5	6	7	8	9	10	11	12	13	14	15
Laney's.....	10	2	3	4	5	6	7	8	9	10	11	12	13
O'Neill's.....	16	7	8	9	10	11	12	13	14	15	16	17	18
Knowlton.....	10	13	14	15	16	17	18	19	20	21	22	23	24
Ponderville.....	2	6	7	8	9	10	11	12	13	14	15	16	17
S. H. Ranch.....	10	9	10	11	12	13	14	15	16	17	18	19	20
Bay Horse.....	15	16	17	18	19	20	21	22	23	24	25	26	27
Alaska.....	9	29	32	7	8	9	10	11	12	13	14	15	16
Bick's Ranch.....	6	4	5	6	7	8	9	10	11	12	13	14	15
School Dist. No. 14.....	67	53	55	65	66	67	68	69	70	71	72	73	74
Keshik.....	14	5	6	7	8	9	10	11	12	13	14	15	16
Garland.....	11	10	11	12	13	14	15	16	17	18	19	20	21
Tierce.....	8	3	4	5	6	7	8	9	10	11	12	13	14
Barham.....	14	6	7	8	9	10	11	12	13	14	15	16	17
Ameland.....	14	6	7	8	9	10	11	12	13	14	15	16	17
Pagett's.....	14	6	7	8	9	10	11	12	13	14	15	16	17
Delway.....	14	6	7	8	9	10	11	12	13	14	15	16	17
Birney.....	14	6	7	8	9	10	11	12	13	14	15	16	17
O'Neill, d.....	229	159	160	249	8	9	10	11	12	13	14	15	16
McLean, r.....	159	160	161	250	9	10	11	12	13	14	15	16	17
Johnson, d.....	159	160	161	250	9	10	11	12	13	14	15	16	17
Loud, f.....	159	160	161	250	9	10	11	12	13	14	15	16	17
Word, i-d.....	159	160	161	250	9	10	11	12	13	14	15	16	17
Von Tobel, r.....	159	160	161	250	9	10	11	12	13	14	15	16	17
Milburn, f-d.....	159	160	161	250	9	10	11	12	13	14	15	16	17
Leamy, i-d.....	159	160	161	250	9	10	11	12	13	14	15	16	17
Harmon, r.....	159	160	161	250	9	10	11	12	13	14	15	16	17
Welsh, f-l.....	159	160	161	250	9	10	11	12	13	14	15	16	17
McLean, i-d.....	159	160	161	250	9	10	11	12	13	14	15	16	17
Proctor, r.....	159	160	161	250	9	10	11	12	13	14	15	16	17
Caldershead, f-p.....	159	160	161	250	9	10	11	12	13	14	15	16	17
Livingston, i-d.....	159	160	161	250	9	10	11	12	13	14	15	16	17
Edwards, r.....	159	160	161	250	9	10	11	12	13	14	15	16	17
Barret, f-d.....	159	160	161	250	9	10	11	12	13	14	15	16	17
Stewart, i-d.....	159	160	161	250	9	10	11	12	13	14	15	16	17
Porter, r.....	159	160	161	250	9	10	11	12	13	14	15	16	17
Donovan, f-p.....	159	160	161	250	9	10	11	12	13	14	15	16	17
Yoder, r.....	159	160	161	250	9	10	11	12	13	14	15	16	17
Hays, f-d.....	159	160	161	250	9	10	11	12	13	14	15	16	17
Marion, i-d.....	159	160	161	250	9	10	11	12	13	14	15	16	17
Bennett, r.....	159	160	161	250	9	10	11	12	13	14	15	16	17
Higgins, f-d.....	159	160	161	250	9	10	11	12	13	14	15	16	17
Hogan, i-d.....	159	160	161	250	9	10	11	12	13	14	15	16	17
Fowom, r.....	159	160	161	250	9	10	11	12	13	14	15	16	17
Toole, f-d.....	159	160	161	250	9	10	11	12	13	14	15	16	17
Kelley, i-d.....	159	160	161	250	9	10	11	12	13	14	15	16	17
Murray, r.....	159	160	161	250	9	10	11	12	13	14	15	16	17
Edwards, f-p.....	159	160	161	250	9	10	11	12	13	14	15	16	17
Bryan, d.....	159	160	161	250	9	10	11	12	13	14	15	16	17
McKinley, r.....	159	160	161	250	9	10	11	12	13	14	15	16	17

PRECINCTS.

CUSTNER COUNTY--Continued.

Members of the Legislature	Sheriff	Clerk of Court	Treasurer	Clerk and Recorder	Assessor	County Attorney	Supt. of Schools	Admin-istrator	Coroner	Surveyor	County Commissioners																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
Ottob, d.....	231	161	272	215	235	277	214	278	294	216	279	217	218	219	220	221	222	223	224	225	226	227	228	229	230	231	232	233	234	235	236	237	238	239	240	241	242	243	244	245	246	247	248	249	250	251	252	253	254	255	256	257	258	259	260	261	262	263	264	265	266	267	268	269	270	271	272	273	274	275	276	277	278	279	280	281	282	283	284	285	286	287	288	289	290	291	292	293	294	295	296	297	298	299	300	301	302	303	304	305	306	307	308	309	310	311	312	313	314	315	316	317	318	319	320	321	322	323	324	325	326	327	328	329	330	331	332	333	334	335	336	337	338	339	340	341	342	343	344	345	346	347	348	349	350	351	352	353	354	355	356	357	358	359	360	361	362	363	364	365	366	367	368	369	370	371	372	373	374	375	376	377	378	379	380	381	382	383	384	385	386	387	388	389	390	391	392	393	394	395	396	397	398	399	400	401	402	403	404	405	406	407	408	409	410	411	412	413	414	415	416	417	418	419	420	421	422	423	424	425	426	427	428	429	430	431	432	433	434	435	436	437	438	439	440	441	442	443	444	445	446	447	448	449	450	451	452	453	454	455	456	457	458	459	460	461	462	463	464	465	466	467	468	469	470	471	472	473	474	475	476	477	478	479	480	481	482	483	484	485	486	487	488	489	490	491	492	493	494	495	496	497	498	499	500	501	502	503	504	505	506	507	508	509	510	511	512	513	514	515	516	517	518	519	520	521	522	523	524	525	526	527	528	529	530	531	532	533	534	535	536	537	538	539	540	541	542	543	544	545	546	547	548	549	550	551	552	553	554	555	556	557	558	559	560	561	562	563	564	565	566	567	568	569	570	571	572	573	574	575	576	577	578	579	580	581	582	583	584	585	586	587	588	589	590	591	592	593	594	595	596	597	598	599	600	601	602	603	604	605	606	607	608	609	610	611	612	613	614	615	616	617	618	619	620	621	622	623	624	625	626	627	628	629	630	631	632	633	634	635	636	637	638	639	640	641	642	643	644	645	646	647	648	649	650	651	652	653	654	655	656	657	658	659	660	661	662	663	664	665	666	667	668	669	670	671	672	673	674	675	676	677	678	679	680	681	682	683	684	685	686	687	688	689	690	691	692	693	694	695	696	697	698	699	700	701	702	703	704	705	706	707	708	709	710	711	712	713	714	715	716	717	718	719	720	721	722	723	724	725	726	727	728	729	730	731	732	733	734	735	736	737	738	739	740	741	742	743	744	745	746	747	748	749	750	751	752	753	754	755	756	757	758	759	760	761	762	763	764	765	766	767	768	769	770	771	772	773	774	775	776	777	778	779	780	781	782	783	784	785	786	787	788	789	790	791	792	793	794	795	796	797	798	799	800	801	802	803	804	805	806	807	808	809	810	811	812	813	814	815	816	817	818	819	820	821	822	823	824	825	826	827	828	829	830	831	832	833	834	835	836	837	838	839	840	841	842	843	844	845	846	847	848	849	850	851	852	853	854	855	856	857	858	859	860	861	862	863	864	865	866	867	868	869	870	871	872	873	874	875	876	877	878	879	880	881	882	883	884	885	886	887	888	889	890	891	892	893	894	895	896	897	898	899	900	901	902	903	904	905	906	907	908	909	910	911	912	913	914	915	916	917	918	919	920	921	922	923	924	925	926	927	928	929	930	931	932	933	934	935	936	937	938	939	940	941	942	943	944	945	946	947	948	949	950	951	952	953	954	955	956	957	958	959	960	961	962	963	964	965	966	967	968	969	970	971	972	973	974	975	976	977	978	979	980	981	982	983	984	985	986	987	988	989	990	991	992	993	994	995	996	997	998	999	1000
Ottob, d.....	231	161	272	215	235	277	214	278	294	216	279	217	218	219	220	221	222	223	224	225	226	227	228	229	230	231	232	233	234	235	236	237	238	239	240	241	242	243	244	245	246	247	248	249	250	251	252	253	254	255	256	257	258	259	260	261	262	263	264	265	266	267	268	269	270	271	272	273	274	275	276	277	278	279	280	281	282	283	284	285	286	287	288	289	290	291	292	293	294	295	296	297	298	299	300	301	302	303	304	305	306	307	308	309	310	311	312	313	314	315	316	317	318	319	320	321	322	323	324	325	326	327	328	329	330	331	332	333	334	335	336	337	338	339	340	341	342	343	344	345	346	347	348	349	350	351	352	353	354	355	356	357	358	359	360	361	362	363	364	365	366	367	368	369	370	371	372	373	374	375	376	377	378	379	380	381	382	383	384	385	386	387	388	389	390	391	392	393	394	395	396	397	398	399	400	401	402	403	404	405	406	407	408	409	410	411	412	413	414	415	416	417	418	419	420	421	422	423	424	425	426	427	428	429	430	431	432	433	434	435	436	437	438	439	440	441	442	443	444	445	446	447	448	449	450	451	452	453	454	455	456	457	458	459	460	461	462	463	464	465	466	467	468	469	470	471	472	473	474	475	476	477	478	479	480	481	482	483	484	485	486	487	488	489	490	491	492	493	494	495	496	497	498	499	500	501	502	503	504	505	506	507	508	509	510	511	512	513	514	515	516	517	518	519	520	521	522	523	524	525	526	527	528	529	530	531	532	533	534	535	536	537	538	539	540	541	542	543	544	545	546	547	548	549	550	551	552	553	554	555	556	557	558	559	560	561	562	563	564	565	566	567	568	569	570	571	572	573	574	575	576	577	578	579	580	581	582	583	584	585	586	587	588	589	590	591	592	593	594	595	596	597	598	599	600	601	602	603	604	605	606	607	608	609	610	611	612	613	614	615	616	617	618	619	620	621	622	623	624	625	626	627	628	629	630	631	632	633	634	635	636	637	638	639	640	641	642	643	644	645	646	647	648	649	650	651	652	653	654	655	656	657	658	659	660	661	662	663	664	665	666	667	668	669	670	671	672	673	674	675	676	677	678	679	680	681	682	683	684	685	686	687	688	689	690	691	692	693	694	695	696	697	698	699	700	701	702	703	704	705	706	707	708	709	710	711	712	713	714	715	716	717	718	719	720	721	722	723	724	725	726	727	728	729	730	731	732	733	734	735	736	737	738	739	740	741	742	743	744	745	746	747	748	749	750	751	752	753	754	755	756	757	758	759	760	761	762	763	764	765	766	767	768	769	770	771	772	773	774	775	776	777	778	779	780	781	782	783	784	785	786	787	788	789	790	791	792	793	794	795	796	797	798	799	800	801	802	803	804	805	806	807	808	809	810	811	812	813	814	815	816	817	818	819	820	821	822	823	824	825	826	827	828	829	830	831	832	833	834	835	836	837	838	839	840	841	842	843	844	845	846	847	848	849	850	851	852	853	854	855	856	857	858	859	860	861	862	863	864	865	866	867	868	869	870	871	872	873	874	875	876	877	878	879	880	881	882	883	884	885	886	887	888	889	890	891	892	893	894	895	896	897	898	899	900	901	902	903	904	905	906	907	908	909	910	911	912	913	914	915	916	917	918	919	920	921	922	923	924	925	926	927	928	929	930	931	932	933	934	935	936	937	938	939	940	941	942																																																										

PRECINCTS

SEVENTH ANNUAL REPORT OF BUREAU

[illegible]

OFFICIAL ELECTION RETURNS FOR DAWSON COUNTY, FOR ELECTION HELD NOVEMBER 6, 1900.

President.	Congress.		Gov't.		Lieut. Gov.		Sec'y of State.		Att'y. Gen.		Treas.		Auditor.		Supt. Schools.		Assoc. Just's Sup. Court.		Jud. State Senator.		Memb's Legislature.												
	McKinley, r.	Bryan, d.	Edwards, f.-p.	Murray, r.	Kelley, i.-d.	Toole, f.-d.	Folsom, r.	Higgins, f.-d.	Bennet, r.	Marion, i.-d.	Hays, f.-d.	Yoder, r.	Donovan, f.-p.	Porter, r.	Stewart, i.-d.	Barret, f.-d.	Edwards, r.	Livingston, i.-d.	Caldershead, f.-p.	Proctor, r.	McLean, i.-d.	Welch, f.-i.	Harmon, r.	Leamy, i.-d.	Millburn, f.-d.	Von Tobel, r.	Word, i.-d.	Loud, r.	Cullen, d.	Lindsay, r.	Thurston, d.	McCona, r.	
	277	124	130	222	1	143	218	130	219	1	137	221	123	220	220	3	190	221	4	124	223	1	126	223	1	126	219	4	361	230	153	174	127
	49	46	46	39	1	61	40	46	27	1	46	28	46	41	1	1	47	39	1	43	41	1	46	42	1	46	41	1	58	62	31	52	34
	34	29	7	34	2	10	32	10	23	1	11	21	13	31	1	1	12	21	1	12	21	1	12	21	1	12	21	1	42	18	26	11	23
	29	30	7	34	2	10	32	10	23	1	11	21	13	31	1	1	12	21	1	12	21	1	12	21	1	12	21	1	42	18	26	11	23
	30	30	7	34	2	10	32	10	23	1	11	21	13	31	1	1	12	21	1	12	21	1	12	21	1	12	21	1	42	18	26	11	23
	30	30	7	34	2	10	32	10	23	1	11	21	13	31	1	1	12	21	1	12	21	1	12	21	1	12	21	1	42	18	26	11	23
	22	22	1	22	1	1	22	1	22	1	1	22	1	22	1	1	22	1	1	22	1	1	22	1	1	22	1	1	22	1	22	1	22
	22	22	1	22	1	1	22	1	22	1	1	22	1	22	1	1	22	1	1	22	1	1	22	1	1	22	1	1	22	1	22	1	22
	13	13	1	13	1	1	13	1	13	1	1	13	1	13	1	1	13	1	1	13	1	1	13	1	1	13	1	1	13	1	13	1	13
	10	10	1	10	1	1	10	1	10	1	1	10	1	10	1	1	10	1	1	10	1	1	10	1	1	10	1	1	10	1	10	1	10
	10	10	1	10	1	1	10	1	10	1	1	10	1	10	1	1	10	1	1	10	1	1	10	1	1	10	1	1	10	1	10	1	10
	16	16	1	16	1	1	16	1	16	1	1	16	1	16	1	1	16	1	1	16	1	1	16	1	1	16	1	1	16	1	16	1	16
	11	11	1	11	1	1	11	1	11	1	1	11	1	11	1	1	11	1	1	11	1	1	11	1	1	11	1	1	11	1	11	1	11
	514	277	346	432	2	289	439	250	445	2	27	421	238	236	2	2	421	238	2	421	238	2	421	238	2	421	238	2	421	238	237	436	
	277			246			211		23			221		230			220			223			223			219			361	230	153	174	127

PRECINCTS.

Glendive, ...
Wibaux, ...
Ridgway, ...
Sidney, ...
Newton, ...
Tolson, ...
Burns Creek, ...
Harmonville, ...
Red Water, ...
Missouri, ...
Big Dry, ...
Byrnes Plains, ...
McCune, ...
Red Route, ...
Totals, ...
Finalities, ...

SEVENTH ANNUAL REPORT OF BUREAU

[illegible]

DEER LODGE COUNTY—Continued.

	President.	Congress.	Governor.	Lieut. Governor.	Sec'y of State.	Att'y. Gen.	Treas.	Auditor.	Supt. Schools.	Associate Just. Sup. Court.
PRECINCTS.										
Ward, I.-d.										
Von Tobel, r.										
Milburn, f.-d.										
Leamy, I.-d.										
HARmon, r.										
Welsh, f.-d.										
McLean, I.-d.										
Proctor, r.										
Calderhead, f.-p.										
LIVINGSTON, I.-d.										
Edwards, r.										
Barret, f.-d.										
Stewart, I.-d.										
Porter, r.										
Donovan, f.-p.										
Toder, r.										
Hays, I. and f.-d.										
Marion, I.-d.										
Bennet, r.										
Higgins, f.-d.										
Hogan, I.-d.										
Folsom, r.										
Toole, f.-d.										
Kelley, I.-d.										
Murray, r.										
Edwards, f.-p.										
Bryan, f.-d.										
MKinley, r.										
Chas.										
Cotton Cliff.										
Washos.										
Storm Lake.										
Total.										
Pluralties.										

	Judge of Judicial District.	State Senator.	Members of the Legislature.	Clerk Dist. Court.	Sheriff.
PRECINCTS.					
Owens, f.-d.					
French, r.					
Conley, I.-d.					
Flynn, f.-d.					
Thomas, r.					
Burke, I.-d.					
Spencer, f.-d.					
Gerdts, f.-d.					
O'Leary, f.-d.					
Schwend, f.-d.					
McGowan, f.-d.					
Dillon, f.-d.					
Jackways, r.					
Williams, r.					
Bielenberg, r.					
Fitzpatrick, r.					
Allen, r.					
English, r.					
McDonnell, I.-d.					
Geary, I.-d.					
Boylan, I.-d.					
Madden, I.-d.					
McTague, I.-d.					
Toole, I.-d.					
Matts, I.-d.					
Davidson, r.					
Kennedy, f.-d.					
Napton, I.-d.					
Winston, r.					
Scharnikow, f.-d.					
Anaconda, I.					
Anaconda, 2.					
Anaconda, 3.					
Anaconda, 4.					
Anaconda, 5.					
Anaconda, 6.					
Anaconda, 7.					
Anaconda, 8.					

DEER LODGE COUNTY—Continued.

[illegible]

DEER LODGE COUNTY—Continued

Treasurer	Clerk & Recorder	Auditor	County Attorney	Superintendent of Schools	Admission'r	Coroner	Surveyor	County Commissioners
Schwend, f.-l..								
Walker, f.-l..								
Miller, r....								
Barnes, r....								
Hoffman, r....								
Kellher, l.-d...								
Turner, l.-d...								
Geary, l.-d....								
Mitchell, f.-l...								
McDonald, r...								
Pinegar, l.-d ...								
Faunt, f.-l....								
Short, r....								
Hughes, l.-d...								
Bolin, r....								
Ballerton, d...								
McLaughlin....								
Thompson, f.-l.								
Sawyer, r.....								
Duffy, l.-d....								
Simpson.....								
Flanagan, f.-l.								
Miller, l.-d....								
Staton, r.....								
German, l.-d..								
Evans, r.....								
Coleman, r....								
Twohy, r....								

PRESIDENTS

Copper Cliff.....	811
Washoe.....	811
Storm Lake.....	811
Total	811

OFFICIAL ELECTION RETURNS FOR FERGUS COUNTY, ELECTION HELD NOVEMBER 6, 1900.

[illegible]

SEVENTH ANNUAL REPORT OF BUREAU

IVERGUE COUNTY—Continued.

	Pres- ident	Congress	Governor	Lieutenant Governor	Sec'y of State	Att'y General	Treasurer	Auditor	Superintendent of Schools	Assoc Justice Supreme Ct	Pre-rob Dist. Ct.	Members of Legislature
East Work.	16	10	10	15	9	16	9	13	10	13	11	11
Deerfield	23	30	24	22	7	24	28	24	34	29	29	29
Maiden	33	30	24	22	7	24	28	24	34	29	29	29
Moccasin	41	15	10	15	9	16	9	13	10	13	11	11
Moccasin City	21	20	21	21	31	27	21	21	21	21	21	21
Grass Range	28	20	21	21	31	27	21	21	21	21	21	21
Forest Grove	24	24	24	24	12	24	12	24	12	24	12	11
Stewart	24	24	24	24	12	24	12	24	12	24	12	11
Box Elder	28	27	24	24	17	27	17	27	17	27	17	11
Box Elder	8	1	8	1	8	1	8	1	8	1	8	2
Adler Grove	15	6	15	2	4	15	2	4	15	2	4	2
Judith	100	100	100	100	100	100	100	100	100	100	100	100
Garfield	41	5	40	16	17	41	17	41	17	41	17	163
Flat Willow	10	6	10	5	6	10	5	6	10	5	6	21
Grass	10	6	10	5	6	10	5	6	10	5	6	21
Muscatell	10	6	10	5	6	10	5	6	10	5	6	21
Hubert	10	6	10	5	6	10	5	6	10	5	6	21
Irre	10	6	10	5	6	10	5	6	10	5	6	21
Lavin	10	6	10	5	6	10	5	6	10	5	6	21
Elso	10	6	10	5	6	10	5	6	10	5	6	21
Flinder	10	6	10	5	6	10	5	6	10	5	6	21
Winder	10	6	10	5	6	10	5	6	10	5	6	21
New Year	10	6	10	5	6	10	5	6	10	5	6	21
Edgewater	10	6	10	5	6	10	5	6	10	5	6	21
Erson	10	6	10	5	6	10	5	6	10	5	6	21
Kendal	10	6	10	5	6	10	5	6	10	5	6	21
Total	1245	817	855	1214	8	1000	1173	8	877	1198	11	1000
Majorities	335	280	280	345	325	430	274	306	311	310	212	157

PERCIVAL COUNTY—Continued.

PRECINCTS.	Memb'r Legis.	Clerk Dist. Court	Sheriff	Treas'r	Clerk & Recor'r	Assessor	County Attorney	Supt. of Schools	Admin'r	Coroner	Surveyor	County Commissioners	
Westfall, d.	75	9	17	73	33	23	61	1	1	1	1	Westfall, d.	75
Harding, d.	46	9	14	73	33	23	61	1	1	1	1	Harding, d.	46
Corbly, d.	51	9	15	73	33	23	61	1	1	1	1	Corbly, d.	51
Nelli, r.	55	9	15	73	33	23	61	1	1	1	1	Nelli, r.	55
Phillips, r.	61	9	15	73	33	23	61	1	1	1	1	Phillips, r.	61
Washburne, r.	46	9	15	73	33	23	61	1	1	1	1	Washburne, r.	46
Hogeland, d.	50	9	15	73	33	23	61	1	1	1	1	Hogeland, d.	50
Stafford, r.	60	9	15	73	33	23	61	1	1	1	1	Stafford, r.	60
Tillotson, d.	46	9	15	73	33	23	61	1	1	1	1	Tillotson, d.	46
David, r.	60	9	15	73	33	23	61	1	1	1	1	David, r.	60
Lewis, d.	41	9	15	73	33	23	61	1	1	1	1	Lewis, d.	41
McFarland, r.	70	9	15	73	33	23	61	1	1	1	1	McFarland, r.	70
Lindsay, d.	54	9	15	73	33	23	61	1	1	1	1	Lindsay, d.	54
Peebles, r.	61	9	15	73	33	23	61	1	1	1	1	Peebles, r.	61
Blackford, d.	41	9	15	73	33	23	61	1	1	1	1	Blackford, d.	41
Belden, r.	60	9	15	73	33	23	61	1	1	1	1	Belden, r.	60
Marshall, d.	43	9	15	73	33	23	61	1	1	1	1	Marshall, d.	43
Fowler, r.	60	9	15	73	33	23	61	1	1	1	1	Fowler, r.	60
Kilpatrick, d.	46	9	15	73	33	23	61	1	1	1	1	Kilpatrick, d.	46
Kelly, r.	61	9	15	73	33	23	61	1	1	1	1	Kelly, r.	61
Burke, d.	42	9	15	73	33	23	61	1	1	1	1	Burke, d.	42
Croft, r.	54	9	15	73	33	23	61	1	1	1	1	Croft, r.	54
Shaw, d.	57	9	15	73	33	23	61	1	1	1	1	Shaw, d.	57
Woods, r.	60	9	15	73	33	23	61	1	1	1	1	Woods, r.	60
Barnes, d.	41	9	15	73	33	23	61	1	1	1	1	Barnes, d.	41
Wright, r.	72	9	15	73	33	23	61	1	1	1	1	Wright, r.	72
Weaver, d.	49	9	15	73	33	23	61	1	1	1	1	Weaver, d.	49

SEVENTH ANNUAL REPORT OF BUREAU

FARGUS COUNTY—Continued.

PRECINCTS.	M'mbr Legis.	Clerk Dist. Court	Sheriff	Treas'r	Clerk & Record'r	Assessor	County Attorney	Supt. of Schools	Admin'r	Coroner	Surveyor	County Commissioners		
												Westfall, d.....	Harding, d....	
												Corbly, d.....	Nell, r.....	
												Phillips, r....	Washburn, r..	
												Hogeland, d....	Stafford, r... ..	
												Tillotson, d....	David, r.....	
												Lewis, d.....	McFarland, r..	
												Lindsay, d... ..	Peebles, r....	
												Blackford, d..	Belden, r.....	
												Marshall, d....	Fowler, r.....	
												Kilpatrick, d..	Kelly, r.....	
												Burke, d.....	Croft, r.....	
												Shaw, d.....	Woods, r.....	
												Barnes, d....	Wright, r....	
												Weaver, d.....		
Flat Willow	7	42	6	16	11	4	12	10	19	5	17	37	4	10
Cruce.....	29	4	16	2	21	6	11	4	11	4	39	10	11	10
Munsiehell	3	23	4	10	5	23	3	23	3	23	3	23	3	23
Heibert	3	23	4	10	5	23	3	23	3	23	3	23	3	23
Irene	3	23	4	10	5	23	3	23	3	23	3	23	3	23
Lavina	3	23	4	10	5	23	3	23	3	23	3	23	3	23
Elso	3	23	4	10	5	23	3	23	3	23	3	23	3	23
Finden	3	23	4	10	5	23	3	23	3	23	3	23	3	23
Wilder	3	23	4	10	5	23	3	23	3	23	3	23	3	23
New Year	3	23	4	10	5	23	3	23	3	23	3	23	3	23
McGregor	3	23	4	10	5	23	3	23	3	23	3	23	3	23
Edgewater	3	23	4	10	5	23	3	23	3	23	3	23	3	23
Everson.....	3	23	4	10	5	23	3	23	3	23	3	23	3	23
Kendall.....	3	23	4	10	5	23	3	23	3	23	3	23	3	23
Total.....	96	1217	851	1004	1108	1185	1306	907	1104	1070	1285	1071	1146	1192
Pluralities	466	1217	851	1004	1108	1185	1306	907	1104	1070	1285	1071	1146	1192

PRECOINCTB.

[illegible]

FLATHEAD COUNTY—Continued.

Members Legislature	Judge 1st Dist.	Clerk Court	Sheriff	Treas.	Clark and Recorder	Assessor	Co. Atty	Supt. Schools	Adminis- trator	Coroner	Surveyor
Adams.....	123	129	119	144	128	122	161	122	121	121	121
Racowicz.....	123	129	119	144	128	122	161	122	121	121	121
Willoughby.....	123	129	119	144	128	122	161	122	121	121	121
Metler.....	123	129	119	144	128	122	161	122	121	121	121
Swaney	123	129	119	144	128	122	161	122	121	121	121
Kennedy	123	129	119	144	128	122	161	122	121	121	121
Robinson	123	129	119	144	128	122	161	122	121	121	121
Spurck.....	123	129	119	144	128	122	161	122	121	121	121
Logan	123	129	119	144	128	122	161	122	121	121	121
Oliver.....	123	129	119	144	128	122	161	122	121	121	121
Mooring.....	123	129	119	144	128	122	161	122	121	121	121
Dunaike	123	129	119	144	128	122	161	122	121	121	121
Phillips.....	123	129	119	144	128	122	161	122	121	121	121
Lagoni.....	123	129	119	144	128	122	161	122	121	121	121
Eaton	123	129	119	144	128	122	161	122	121	121	121
Hilburn.....	123	129	119	144	128	122	161	122	121	121	121
Swaney	123	129	119	144	128	122	161	122	121	121	121
Hand	123	129	119	144	128	122	161	122	121	121	121
Lewis	123	129	119	144	128	122	161	122	121	121	121
Lang.....	123	129	119	144	128	122	161	122	121	121	121
Nofsinger, r.....	123	129	119	144	128	122	161	122	121	121	121
Smith, d.....	123	129	119	144	128	122	161	122	121	121	121
MacDonald	123	129	119	144	128	122	161	122	121	121	121
Bjornedy	123	129	119	144	128	122	161	122	121	121	121
McCarthy.....	123	129	119	144	128	122	161	122	121	121	121
Churchill.....	123	129	119	144	128	122	161	122	121	121	121
Kallispeil, East Side.....	123	129	119	144	128	122	161	122	121	121	121
Kallispeil, West Side.....	123	129	119	144	128	122	161	122	121	121	121
Helena Flats	123	129	119	144	128	122	161	122	121	121	121
Stillwater	123	129	119	144	128	122	161	122	121	121	121
Sedan.....	123	129	119	144	128	122	161	122	121	121	121
Marion.....	123	129	119	144	128	122	161	122	121	121	121
Peanant Valley	123	129	119	144	128	122	161	122	121	121	121
Bad Rock.....	123	129	119	144	128	122	161	122	121	121	121
Fairview	123	129	119	144	128	122	161	122	121	121	121
Bagan	123	129	119	144	128	122	161	122	121	121	121
Creston	123	129	119	144	128	122	161	122	121	121	121
Holt	123	129	119	144	128	122	161	122	121	121	121
Columbia Falls	123	129	119	144	128	122	161	122	121	121	121
Baton	123	129	119	144	128	122	161	122	121	121	121
Essex	123	129	119	144	128	122	161	122	121	121	121
Whitish	123	129	119	144	128	122	161	122	121	121	121
Spring Prairie	123	129	119	144	128	122	161	122	121	121	121
Tobacco Plains	123	129	119	144	128	122	161	122	121	121	121
Marston.....	123	129	119	144	128	122	161	122	121	121	121
Demersville.....	123	129	119	144	128	122	161	122	121	121	121
Broken	123	129	119	144	128	122	161	122	121	121	121
Dayton	123	129	119	144	128	122	161	122	121	121	121
Lobby.....	123	129	119	144	128	122	161	122	121	121	121
West Fisher	123	129	119	144	128	122	161	122	121	121	121
Howard's Camp	123	129	119	144	128	122	161	122	121	121	121
Jennings	123	129	119	144	128	122	161	122	121	121	121
Troy.....	123	129	119	144	128	122	161	122	121	121	121
Sylvanite	123	129	119	144	128	122	161	122	121	121	121
Totals	843	401	413	823	1953	944	1296	311	...	...	...
Pluralities	...	...	...	...	...	...	...	...	...	...	...

PUEBLOS.

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PRECINCTS

President	Congress	Governor	Lieut. Governor	Sec. of State	Att'y Gen'l	Treasurer	Auditor	Supt. of Schools	Assoc. Justice Supreme Ct
McKinley, R....	1146	1117	1122	176	1001	1094	179	1133	191
Bryan, f.-d....	1146	1117	1122	176	1001	1094	179	1133	191
Edwards, f.-p....	1146	1117	1122	176	1001	1094	179	1133	191
Murray, f....	1146	1117	1122	176	1001	1094	179	1133	191
Kelley, f.-d....	1146	1117	1122	176	1001	1094	179	1133	191
Toole, f.-d....	1146	1117	1122	176	1001	1094	179	1133	191
Folsom, f....	1146	1117	1122	176	1001	1094	179	1133	191
Hogan, f.-d....	1146	1117	1122	176	1001	1094	179	1133	191
Higgins, f.-d....	1146	1117	1122	176	1001	1094	179	1133	191
Bennett, f....	1146	1117	1122	176	1001	1094	179	1133	191
Marion, f.-d....	1146	1117	1122	176	1001	1094	179	1133	191
Hayes, f. and f.-d....	1146	1117	1122	176	1001	1094	179	1133	191
Yoder, f....	1146	1117	1122	176	1001	1094	179	1133	191
Donovan, f.-p....	1146	1117	1122	176	1001	1094	179	1133	191
Porter, f....	1146	1117	1122	176	1001	1094	179	1133	191
Stewart, f.-d....	1146	1117	1122	176	1001	1094	179	1133	191
Barret, f.-d....	1146	1117	1122	176	1001	1094	179	1133	191
Edwards, f....	1146	1117	1122	176	1001	1094	179	1133	191
Livingston, f.-d....	1146	1117	1122	176	1001	1094	179	1133	191
Caldwellhead, f.-p....	1146	1117	1122	176	1001	1094	179	1133	191
Proctor, f....	1146	1117	1122	176	1001	1094	179	1133	191
McLean, f.-d....	1146	1117	1122	176	1001	1094	179	1133	191
Welsh, f.-l....	1146	1117	1122	176	1001	1094	179	1133	191
Harmon, f....	1146	1117	1122	176	1001	1094	179	1133	191
Leamy, f.-d....	1146	1117	1122	176	1001	1094	179	1133	191
Millburn, f.-d....	1146	1117	1122	176	1001	1094	179	1133	191
Von Tobel, f....	1146	1117	1122	176	1001	1094	179	1133	191
Word, f.-d....	1146	1117	1122	176	1001	1094	179	1133	191

GALLATIN COUNTY—Continued.

Precincts.	Members of the Legislature										Judge of the Judicial District	State Senator	Clerk Dist. Court	Sheriff	Treas	Clerk and Recorder	Assessor						
	East Bosman	South Bosman	West Bosman	Baker	Belgrade	Brigden	Chestnut	Connell	F. Athend	Gallatin													
East Bosman	189	183	194	187	176	185	19	25	19	190	196	301	165	35	302	206	188	301	174	145	185	131	191
South Bosman	149	180	140	168	161	170	17	20	17	174	190	162	155	105	144	146	187	164	181	144	147	176	176
West Bosman	180	144	150	179	169	200	36	40	33	279	279	105	170	42	190	174	185	213	214	251	184	186	186
Baker	14	12	14	17	17	19	15	15	13	112	112	13	13	1	13	15	15	19	13	15	13	15	13
Belgrade	88	76	88	80	65	65	17	13	19	83	69	81	57	21	16	16	66	115	66	66	66	66	66
Brigden	16	14	16	28	29	41	1	3	30	27	27	36	46	31	16	40	13	46	17	39	40	40	40
Chestnut	34	40	36	32	35	35	3	35	30	27	27	37	33	21	15	70	44	67	21	33	20	20	20
Connell	22	35	19	30	34	33	14	14	17	66	66	66	66	15	55	33	37	37	33	33	33	33	33
F. Athend	50	48	40	36	34	34	14	14	17	59	59	59	59	8	30	38	36	68	68	68	68	68	68
Gallatin	18	16	24	67	47	59	3	4	3	35	35	30	54	16	30	38	36	68	68	68	68	68	68
Hilldale	40	34	37	13	17	13	17	13	3	12	12	28	21	18	20	33	37	37	37	37	37	37	37
Madison	17	14	19	25	17	13	3	1	3	12	12	28	21	18	20	33	37	37	37	37	37	37	37
Middle Creek	21	13	18	18	23	22	9	7	6	28	28	21	17	10	6	33	35	35	35	35	35	35	35
Montfort	30	26	29	38	37	47	2	3	1	31	31	51	49	1	27	44	44	44	44	44	44	44	44
Manhattan	34	34	37	44	58	61	1	1	1	25	25	46	13	1	28	32	32	32	32	32	32	32	32
Besse Creek	28	28	27	13	17	10	1	1	1	25	25	46	13	1	28	32	32	32	32	32	32	32	32
Glendale	70	69	73	10	9	12	2	2	2	17	17	55	4	4	71	64	64	64	64	64	64	64	64
Spanish Creek	16	17	17	10	9	1																	
Spring Hill	32	23	23	21	29	7	6	6	6														
Three Forks	15	18	20	7	6	6																	
West Galatin	28	30	31	48	40	55	3	3	4														
Willow Creek	51	48	60			20	1	1	1														
Total ..	1141	1020	1101	1157	1108	1180	189	193	163	1100	1309	1136	1101	194	1076	1254	1206	1269	1259	1096	1519	1167	1167
Pluralities.....											209	85					41	945		411	89	89	89

GALLATIN COUNTY—Continued.

Precincts	County Attorney		Superintendent of Schools		County Administrator		County Engineer		County Commissioners	
	Name	Count	Name	Count	Name	Count	Name	Count	Name	Count
East Roseman	188	197	212	182	198	178	199	172	190	133
South Roseman	153	172	149	182	168	148	187	190	190	138
West Roseman	168	199	217	169	204	155	145	197	208	153
Walker	14	17	16	15	16	15	14	15	16	172
Belgrade	33	68	117	104	65	88	64	119	87	67
Bridge	24	33	15	65	19	24	43	34	43	20
Chestnut	46	51	35	79	44	39	69	53	48	56
Connell	30	38	22	33	22	33	29	29	43	46
Fathhead	63	88	63	53	61	61	63	61	63	38
Gallatin	21	26	23	66	35	48	35	35	36	35
Hillside	21	15	14	15	34	15	35	35	15	15
Madison	17	21	26	20	21	17	29	19	19	23
Middle Creek	16	27	37	30	21	37	37	27	42	34
Monforton	82	41	49	67	86	61	65	64	64	36
Manhattan	59	70	49	54	35	61	55	55	56	36
Manhattan	26	19	25	19	25	15	17	17	17	17
Reese Creek	73	69	71	68	74	62	67	77	77	27
Sticksville	13	13	15	9	14	8	10	10	10	9
Spanish Creek	12	13	15	32	24	30	35	35	35	4
Spring Hill	16	40	21	32	19	7	20	19	21	4
Three Forks	18	6	21	18	22	20	22	22	22	67
West Gallatin	21	47	47	24	52	60	52	52	52	56
Willow Creek	21	30	56	24	52	25	57	57	57	37
Total	1125	1240	1278	1204	1210	1080	1470	1172	1191	1120
Paralities	...	115	72	129	129	...	115	...	56	...

OFFICIAL ELECTION RETURNS FOR GRANITE COUNTY FOR ELECTION HELD NOVEMBER 6, 1900.

	Presi- dent	Congress	Governor	Lieut. Gov.	Sec'y of State	Att'y Gen.	State Treas.	State Auditor	Sup't. Public Instruction	Associate Justice Sup't Court	Judge of Judicial District	Mem'b's Legis.
Phillipsburg North	64	144	110	100	136	96	48	63	23	66	63	63
Phillipsburg South	75	152	125	144	156	120	108	77	25	74	74	74
Combination	2	3	4	3	4	3	3	2	1	2	2	2
Quigley	11	28	14	15	11	11	4	10	4	11	11	11
Rock Creek	31	77	37	32	35	35	18	18	14	18	18	18
Bimetallic	53	124	47	43	42	46	21	22	15	40	40	40
Granite	53	124	47	43	42	46	21	22	15	40	40	40
Princeton	16	37	14	14	13	14	5	5	3	6	6	6
Stones Station	38	87	34	32	32	32	14	14	10	15	15	15
New Chicago	22	51	19	18	19	19	8	8	6	10	10	10
Drummond	22	51	19	18	19	19	8	8	6	10	10	10
Beaumont	24	54	21	20	20	20	9	9	7	12	12	12
Garnett	24	54	21	20	20	20	9	9	7	12	12	12
Moose Lake	24	54	21	20	20	20	9	9	7	12	12	12
Porter	24	54	21	20	20	20	9	9	7	12	12	12
Gold Creek	24	54	21	20	20	20	9	9	7	12	12	12
Haarnark	24	54	21	20	20	20	9	9	7	12	12	12
Total	400	1000	371	371	371	371	371	371	371	371	371	371
Pluralities	619	1519	619	619	619	619	619	619	619	619	619	619
Musigbrod, r....	63	126	110	100	136	96	48	63	23	66	63	63
Weinstein, r....	66	129	113	103	139	99	51	66	25	74	74	74
Scharnikow, p....	63	126	110	100	136	96	48	63	23	66	63	63
Napton, d....	63	126	110	100	136	96	48	63	23	66	63	63
Winston, r....	63	126	110	100	136	96	48	63	23	66	63	63
Word, l.-d....	63	126	110	100	136	96	48	63	23	66	63	63
Milburn, l.-d....	63	126	110	100	136	96	48	63	23	66	63	63
Van Tol, r....	63	126	110	100	136	96	48	63	23	66	63	63
Leamy, l.-d....	63	126	110	100	136	96	48	63	23	66	63	63
Welsh, l.-d....	63	126	110	100	136	96	48	63	23	66	63	63
Harmon, r....	63	126	110	100	136	96	48	63	23	66	63	63
McLean, l.-d....	63	126	110	100	136	96	48	63	23	66	63	63
Calderhead, -l.p..	63	126	110	100	136	96	48	63	23	66	63	63
Proctor, r....	63	126	110	100	136	96	48	63	23	66	63	63
Livingston, l.-d..	63	126	110	100	136	96	48	63	23	66	63	63
Barret, f.-d....	63	126	110	100	136	96	48	63	23	66	63	63
Edwards, r....	63	126	110	100	136	96	48	63	23	66	63	63
Stewart, l.-d....	63	126	110	100	136	96	48	63	23	66	63	63
Donovan, f.-p....	63	126	110	100	136	96	48	63	23	66	63	63
Porter, r....	63	126	110	100	136	96	48	63	23	66	63	63
Hays, l. and f.-d..	63	126	110	100	136	96	48	63	23	66	63	63
Yoder, r....	63	126	110	100	136	96	48	63	23	66	63	63
Marion, l.-d....	63	126	110	100	136	96	48	63	23	66	63	63
Higgins, f.-d....	63	126	110	100	136	96	48	63	23	66	63	63
Bennett, f....	63	126	110	100	136	96	48	63	23	66	63	63
Hogan, l.-d....	63	126	110	100	136	96	48	63	23	66	63	63
Toole, f.-d....	63	126	110	100	136	96	48	63	23	66	63	63
Folsom, r....	63	126	110	100	136	96	48	63	23	66	63	63
Kelley, l.-d....	63	126	110	100	136	96	48	63	23	66	63	63
Edwards, f.-d....	63	126	110	100	136	96	48	63	23	66	63	63
Murray, r....	63	126	110	100	136	96	48	63	23	66	63	63
Bryan, f.-d....	63	126	110	100	136	96	48	63	23	66	63	63
McKinley, r....	63	126	110	100	136	96	48	63	23	66	63	63

PRECINCTS.

GRANITE COUNTY—Continued.

PRECINCTS.	Members Legislature					Sheriff	Clerk and Recorder		Co. Treas.	Co. Assessor		Clerk Court	Co. Atty	Supt. Schools	County Public Ser. Admin. Unbr.		Corner
	1	2	3	4	5		1	2		1	2				1	2	
Phillipsburg North	61	61	70	2	8	61	61	119	2	6	12	16	6	6	61	121	61
Phillipsburg South	61	61	70	2	8	61	61	119	2	6	12	16	6	6	61	121	61
Combination	61	61	70	2	8	61	61	119	2	6	12	16	6	6	61	121	61
Quigley	61	61	70	2	8	61	61	119	2	6	12	16	6	6	61	121	61
Rock Creek	61	61	70	2	8	61	61	119	2	6	12	16	6	6	61	121	61
Bimetallic	61	61	70	2	8	61	61	119	2	6	12	16	6	6	61	121	61
Granite	61	61	70	2	8	61	61	119	2	6	12	16	6	6	61	121	61
Princeton	61	61	70	2	8	61	61	119	2	6	12	16	6	6	61	121	61
Baurie	61	61	70	2	8	61	61	119	2	6	12	16	6	6	61	121	61
Stone Station	61	61	70	2	8	61	61	119	2	6	12	16	6	6	61	121	61
New Chicago	61	61	70	2	8	61	61	119	2	6	12	16	6	6	61	121	61
Drummond	61	61	70	2	8	61	61	119	2	6	12	16	6	6	61	121	61
Seamouth	61	61	70	2	8	61	61	119	2	6	12	16	6	6	61	121	61
Garnet	61	61	70	2	8	61	61	119	2	6	12	16	6	6	61	121	61
Moose Lake	61	61	70	2	8	61	61	119	2	6	12	16	6	6	61	121	61
Porter	61	61	70	2	8	61	61	119	2	6	12	16	6	6	61	121	61
Gold Creek	61	61	70	2	8	61	61	119	2	6	12	16	6	6	61	121	61
Hamark	61	61	70	2	8	61	61	119	2	6	12	16	6	6	61	121	61
Total	61	61	70	2	8	61	61	119	2	6	12	16	6	6	61	121	61
Pluralities	61	61	70	2	8	61	61	119	2	6	12	16	6	6	61	121	61
Getty, f....	61	61	70	2	8	61	61	119	2	6	12	16	6	6	61	121	61
Ray, d....	61	61	70	2	8	61	61	119	2	6	12	16	6	6	61	121	61
Craven, f....	61	61	70	2	8	61	61	119	2	6	12	16	6	6	61	121	61
Allison, f....	61	61	70	2	8	61	61	119	2	6	12	16	6	6	61	121	61
Axtell, f....	61	61	70	2	8	61	61	119	2	6	12	16	6	6	61	121	61
Donyas, f....	61	61	70	2	8	61	61	119	2	6	12	16	6	6	61	121	61
Crallie, d....	61	61	70	2	8	61	61	119	2	6	12	16	6	6	61	121	61
Ryan, f....	61	61	70	2	8	61	61	119	2	6	12	16	6	6	61	121	61
Miner, d....	61	61	70	2	8	61	61	119	2	6	12	16	6	6	61	121	61
Craven, f....	61	61	70	2	8	61	61	119	2	6	12	16	6	6	61	121	61
Durfee, f....	61	61	70	2	8	61	61	119	2	6	12	16	6	6	61	121	61
Brown, d....	61	61	70	2	8	61	61	119	2	6	12	16	6	6	61	121	61
Shull, f....	61	61	70	2	8	61	61	119	2	6	12	16	6	6	61	121	61
Abbey, f....	61	61	70	2	8	61	61	119	2	6	12	16	6	6	61	121	61
Kalser, d....	61	61	70	2	8	61	61	119	2	6	12	16	6	6	61	121	61
Hartley, f....	61	61	70	2	8	61	61	119	2	6	12	16	6	6	61	121	61
Hynes, f....	61	61	70	2	8	61	61	119	2	6	12	16	6	6	61	121	61
Penrose, d....	61	61	70	2	8	61	61	119	2	6	12	16	6	6	61	121	61
Wallender, f....	61	61	70	2	8	61	61	119	2	6	12	16	6	6	61	121	61
Thomas, f....	61	61	70	2	8	61	61	119	2	6	12	16	6	6	61	121	61
Featherman, d....	61	61	70	2	8	61	61	119	2	6	12	16	6	6	61	121	61
Lahson, f....	61	61	70	2	8	61	61	119	2	6	12	16	6	6	61	121	61
Neu, f....	61	61	70	2	8	61	61	119	2	6	12	16	6	6	61	121	61
Bowie, d....	61	61	70	2	8	61	61	119	2	6	12	16	6	6	61	121	61
Arms, f....	61	61	70	2	8	61	61	119	2	6	12	16	6	6	61	121	61
Metcalf	61	61	70	2	8	61	61	119	2	6	12	16	6	6	61	121	61
Wells, d....	61	61	70	2	8	61	61	119	2	6	12	16	6	6	61	121	61
Johnson, f....	61	61	70	2	8	61	61	119	2	6	12	16	6	6	61	121	61
McBee, f....	61	61	70	2	8	61	61	119	2	6	12	16	6	6	61	121	61
Ward, f....	61	61	70	2	8	61	61	119	2	6	12	16	6	6	61	121	61
Lewney, f....	61	61	70	2	8	61	61	119	2	6	12	16	6	6	61	121	61
Lucas, d....	61	61	70	2	8	61	61	119	2	6	12	16	6	6	61	121	61
Lannen, d....	61	61	70	2	8	61	61	119	2	6	12	16	6	6	61	121	61

OFFICIAL ELECTION RETURNS FOR JEFFERSON COUNTY, FOR ELECTION HELD NOVEMBER 5, 1900.

Precinct	Congress	Governor	Lieut. Governor	Sec'y of State	Attorney General	Treasurer	Auditor	Superintendent of Schools	Associate Justice	Judge of District	Members of Legislature
Cancy.....	17	119	8	25	13	107	29	30	10	11	104
Jefferson.....	8	25	11	17	13	107	29	30	10	11	104
Boulder.....	90	153	32	17	140	92	139	102	15	15	125
Whitetail.....	100	147	34	14	149	94	134	95	13	13	125
Wicker.....	24	60	48	26	5	50	25	6	4	4	23
Lower Boulder.....	6	24	19	6	3	34	6	4	6	4	23
Cornet.....	6	24	19	6	3	34	6	4	6	4	23
Cold Springs.....	11	46	42	3	6	15	3	6	3	3	17
Jefferson River.....	70	92	72	6	14	89	65	13	8	8	73
Elkhorn.....	3	10	10	8	1	10	8	1	10	8	11
Norain Side Boulder.....	9	11	9	9	1	11	8	1	11	8	11
Ten Mile.....	6	16	9	9	6	11	4	6	11	4	11
Gregory.....	10	26	32	10	24	10	1	25	11	1	25
Cortin.....	12	43	46	10	46	10	4	46	10	4	46
Woodville.....	3	14	10	3	1	12	3	1	12	3	14
Mitchell Gulch.....	12	13	13	13	3	12	3	12	3	12	13
Lockhart.....	12	13	13	13	3	12	3	12	3	12	13
Eva May.....	12	13	13	13	3	12	3	12	3	12	13
Bernice.....	12	13	13	13	3	12	3	12	3	12	13
Elk Park.....	12	13	13	13	3	12	3	12	3	12	13
Mocking Bird.....	12	13	13	13	3	12	3	12	3	12	13
Bevinville.....	12	13	13	13	3	12	3	12	3	12	13
Honestake.....	12	13	13	13	3	12	3	12	3	12	13
Rock Spur.....	12	13	13	13	3	12	3	12	3	12	13
McDermott.....	12	13	13	13	3	12	3	12	3	12	13
Total.....	488	980	924	467	94	918	400	119	923	497	81
Puralties.....	488	980	924	467	94	918	400	119	923	497	81

PRECINCTS.

JEFFERSON COUNTY—Continued.

Precincts	Members of the Legislature					Clerk Dist. Cr.	Sheriff	Treasurer	Clerk & Recorder	Assessor	County Atty	Sup't of Schools	Adm'r	Comer	Sav- er- or	County Commissioners																			
	McNeill	Sponheim, r.	Davis, r.	Madden, l.-d.	Leary, l.-d.											Burkett, l.-d.	Holloway, d	Ten Eyck, r.	Sherrlock, d.	Gibson, r.	Tuttle	Dean	Scharf	Simpkins	Murphy	Shepherd	Murphy	Stranahan	Frawley	Fitcher	Thompson	Benjamin	McNulty	Baskett	Crahe
Clancy.....	48	19	17	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
Jefferson	19	17	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
Boulder	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
Whitcomb	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
Wickes	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
Lower Boulder	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
Comet	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
Cold Springs	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
Jefferson River	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
Elkhorn	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
North Side Boulder	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
Basin	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
Ten Mile	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
Gregory	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
Corbin	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
Woodville	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
Matchell Gulch	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
Lockhart	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
Eva May	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
Barlow	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
Elk Park	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
Mocking Bird	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
Devinsville	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
Homestead	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
Rock Spur	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
McDonnell	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
Total	600	610	487	21	125	65	705	644	267	706	706	674	729	601	546	504	468	745	601	671	605	555	535	555	570	585	585	585	585	585	585	585	585	585	585
Floralities	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....																								

PRECINCTS

OFFICIAL ELECTION RETURNS FOR LEWIS AND CLARKE COUNTY, FOR ELECTION HELD NOVEMBER 4, 1902.

President	Congress	Governor	Lieut. Governor	Sec'y of State	Att'y General	Treasurer	Auditor	Superintendent of Schools			Asso. Justice of Supreme Ct.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
								Word, I.-d....	Von Tobel, r....	Milburn, -f.d....																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
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LEWIS AND CLARKE COUNTY—Continued.

PRECINCTS.	Members of the Legislature			State Senator	Judge in Judicial District		
	Judge in Judicial District	State Senator	Members of the Legislature		Judge in Judicial District	State Senator	Judge in Judicial District
Helena, 1...	114	114	McConnell, l.-d...	114	114	114	114
Helena, 2...	115	115	Grindrod, l.-d...	115	115	115	115
Helena, 3...	116	116	Lyden, l.-d...	116	116	116	116
Helena, 4...	117	117	Norris, l.-d...	117	117	117	117
Helena, 5...	118	118	Brandagee, l.-d...	118	118	118	118
Helena, 6...	119	119	Working, r...	119	119	119	119
Helena, 7...	120	120	Wick, r...	120	120	120	120
Helena, 8...	121	121	Billers, r...	121	121	121	121
Helena, 9...	122	122	Mares, r...	122	122	122	122
Helena, 10...	123	123	Morris, r...	123	123	123	123
Helena, 11...	124	124	Balliett, r...	124	124	124	124
Helena, 12...	125	125	Landstrum, r...	125	125	125	125
Helena, 13...	126	126	Sanden, f.-p...	126	126	126	126
Helena, 14...	127	127	Donaldson, f.-d...	127	127	127	127
Helena, 15...	128	128	Cram, f.-d...	128	128	128	128
Helena, 16...	129	129	Urquhart, f.-d...	129	129	129	129
Helena, 17...	130	130	Hartwig, f.-d...	130	130	130	130
Helena, 18...	131	131	Sullivan, f.-d...	131	131	131	131
Helena, 19...	132	132	Baker, f.-d...	132	132	132	132
Helena, 20...	133	133	Stuewe, l.-d...	133	133	133	133
Helena, 21...	134	134	Huffaker, r...	134	134	134	134
Helena, 22...	135	135	Biggs, f.-d...	135	135	135	135
Helena, 23...	136	136	Heywood, r...	136	136	136	136
Helena, 24...	137	137	Smith, r...	137	137	137	137
Helena, 25...	138	138	Clements, f.-p...	138	138	138	138
Helena, 26...	139	139	Hepner, f.-d...	139	139	139	139
Helena, 27...	140	140		140	140	140	140
Helena, 28...	141	141		141	141	141	141
Helena, 29...	142	142		142	142	142	142
Helena, 30...	143	143		143	143	143	143
Helena, 31...	144	144		144	144	144	144
Helena, 32...	145	145		145	145	145	145
Helena, 33...	146	146		146	146	146	146
Helena, 34...	147	147		147	147	147	147
Helena, 35...	148	148		148	148	148	148
Helena, 36...	149	149		149	149	149	149
Helena, 37...	150	150		150	150	150	150
Helena, 38...	151	151		151	151	151	151
Helena, 39...	152	152		152	152	152	152
Helena, 40...	153	153		153	153	153	153
Helena, 41...	154	154		154	154	154	154
Helena, 42...	155	155		155	155	155	155
Helena, 43...	156	156		156	156	156	156
Helena, 44...	157	157		157	157	157	157
Helena, 45...	158	158		158	158	158	158
Helena, 46...	159	159		159	159	159	159
Helena, 47...	160	160		160	160	160	160
Helena, 48...	161	161		161	161	161	161
Helena, 49...	162	162		162	162	162	162
Helena, 50...	163	163		163	163	163	163
Helena, 51...	164	164		164	164	164	164
Helena, 52...	165	165		165	165	165	165
Helena, 53...	166	166		166	166	166	166
Helena, 54...	167	167		167	167	167	167
Helena, 55...	168	168		168	168	168	168
Helena, 56...	169	169		169	169	169	169
Helena, 57...	170	170		170	170	170	170
Helena, 58...	171	171		171	171	171	171
Helena, 59...	172	172		172	172	172	172
Helena, 60...	173	173		173	173	173	173
Helena, 61...	174	174		174	174	174	174
Helena, 62...	175	175		175	175	175	175
Helena, 63...	176	176		176	176	176	176
Helena, 64...	177	177		177	177	177	177
Helena, 65...	178	178		178	178	178	178
Helena, 66...	179	179		179	179	179	179
Helena, 67...	180	180		180	180	180	180
Helena, 68...	181	181		181	181	181	181
Helena, 69...	182	182		182	182	182	182
Helena, 70...	183	183		183	183	183	183
Helena, 71...	184	184		184	184	184	184
Helena, 72...	185	185		185	185	185	185
Helena, 73...	186	186		186	186	186	186
Helena, 74...	187	187		187	187	187	187
Helena, 75...	188	188		188	188	188	188
Helena, 76...	189	189		189	189	189	189
Helena, 77...	190	190		190	190	190	190
Helena, 78...	191	191		191	191	191	191
Helena, 79...	192	192		192	192	192	192
Helena, 80...	193	193		193	193	193	193
Helena, 81...	194	194		194	194	194	194
Helena, 82...	195	195		195	195	195	195
Helena, 83...	196	196		196	196	196	196
Helena, 84...	197	197		197	197	197	197
Helena, 85...	198	198		198	198	198	198
Helena, 86...	199	199		199	199	199	199
Helena, 87...	200	200		200	200	200	200
Helena, 88...	201	201		201	201	201	201
Helena, 89...	202	202		202	202	202	202
Helena, 90...	203	203		203	203	203	203
Helena, 91...	204	204		204	204	204	204
Helena, 92...	205	205		205	205	205	205
Helena, 93...	206	206		206	206	206	206
Helena, 94...	207	207		207	207	207	207
Helena, 95...	208	208		208	208	208	208
Helena, 96...	209	209		209	209	209	209
Helena, 97...	210	210		210	210	210	210
Helena, 98...	211	211		211	211	211	211
Helena, 99...	212	212		212	212	212	212
Helena, 100...	213	213		213	213	213	213
Helena, 101...	214	214		214	214	214	214
Helena, 102...	215	215		215	215	215	215
Helena, 103...	216	216		216	216	216	216
Helena, 104...	217	217		217	217	217	217
Helena, 105...	218	218		218	218	218	218
Helena, 106...	219	219		219	219	219	219
Helena, 107...	220	220		220	220	220	220
Helena, 108...	221	221		221	221	221	221
Helena, 109...	222	222		222	222	222	222
Helena, 110...	223	223		223	223	223	223
Helena, 111...	224	224		224	224	224	224
Helena, 112...	225	225		225	225	225	225
Helena, 113...	226	226		226	226	226	226
Helena, 114...	227	227		227	227	227	227
Helena, 115...	228	228		228	228	228	228
Helena, 116...	229	229		229	229	229	229
Helena, 117...	230	230		230	230	230	230
Helena, 118...	231	231		231	231	231	231
Helena, 119...	232	232		232	232	232	232
Helena, 120...	233	233		233	233	233	233
Helena, 121...	234	234		234	234	234	234
Helena, 122...	235	235		235	235	235	235
Helena, 123...	236	236		236	236	236	236
Helena, 124...	237	237		237	237	237	237
Helena, 125...	238	238		238	238	238	238
Helena, 126...	239	239		239	239	239	239
Helena, 127...	240	240		240	240	240	240
Helena, 128...	241	241		241	241	241	241
Helena, 129...	242	242		242	242	242	242
Helena, 130...	243	243		243	243	243	243
Helena, 131...	244	244		244	244	244	244
Helena, 132...	245	245		245	245	245	245
Helena, 133...	246	246		246	246	246	246
Helena, 134...	247	247		247	247	247	247
Helena, 135...	248	248		248	248	248	248
Helena, 136...	249	249		249	249	249	249
Helena, 137...	250	250		250	250	250	250
Helena, 138...	251	251		251	251	251	251
Helena, 139...	252	252		252	252	252	252
Helena, 140...	253	253		253	253	253	253
Helena, 141...	254	254		254	254	254	254
Helena, 142...	255	255		255	255	255	255
Helena, 143...	256	256		256	256	256	256
Helena, 144...	257	257		257	257	257	257
Helena, 145...	258	258		258	258	258	258
Helena, 146...	259	259		259	259	259	259
Helena, 147...	260	260		260	260	260	260
Helena, 148...	261	261		261	261	261	261
Helena, 149...	262	262		262	262	262	262
Helena, 150...	263	263		263	263	263	263
Helena, 151...	264	264		264	264	264	264
Helena, 152...	265	265		265	265	265	265
Helena, 153...	266	266		266	266	266	266
Helena, 154...	267	267		267	267	267	267
Helena, 155...	268	268		268	268	268	268
Helena, 156...	269	269		269	269	269	269
Helena, 157...	270	270		270	270	270	270
Helena, 158...	271	271		271	271	271	271
Helena, 159...	272	272		272	272	272	272
Helena, 160...	273	273		273	273	273	273
Helena, 161...	274	274		274	274	274	274
Helena, 162...	275	275		275	275	275	275
Helena, 163...	276	276		276	276	276	276
Helena, 164...	277	277		277	277	277	277
Helena, 165...	278	278		278	278	278	278
Helena, 166...	279	279		279	279	279	279
Helena, 167...	280	280		280	280	280	280
Helena, 168...	281	281		281	281	281	281
Helena, 169...	282	282		282	282	282	282
Helena, 170...	283	283		283	283	283	283
Helena, 171...	284	284		284	284	284	284
Helena, 172...	285	285					

LEWIS AND CLARKE COUNTY—Continued.

PRECINCTS.	Judges in Judicial District		State Senator		Members of the Legislature	
	1890	1891	1890	1891	1890	1891
Valley	28	151	37	171	14	16
East Helena	168	15	171	15	174	180
Fr'ch Bar & Spokane	13	7	15	9	2	2
Mitchell	4	7	1	1	2	6
Crail	20	28	21	26	25	25
Dearborn	2	3	4	7	5	5
Hogan	4	7	5	7	5	5
Augusta	47	67	6	11	19	19
Dearborn Canyon	3	3	10	10	15	15
Rock Creek Basin	9	10	12	12	13	13
Middle Fork Dearborn	24	24	23	23	16	16
York	27	27	23	23	16	16
Canyon Ferry	22	22	23	23	12	12
Lincoln	22	22	23	23	12	12
Silver Camp	22	22	23	23	12	12
Stemple	22	22	23	23	12	12
Cooper Lake	22	22	23	23	12	12
Birdseye	22	22	23	23	12	12
Dickens	22	22	23	23	12	12
Wolf Creek	22	22	23	23	12	12
Total	2160	2216	2216	2216	2216	2216
Pluralities	2216	2216	2216	2216	2216	2216
McConnell, l.-d.	2	11	1	11	1	11
Grindrod, l.-d.	3	7	1	7	1	7
Lyden, l.-d.	3	7	1	7	1	7
Norris, l.-d.	1	7	1	7	1	7
Brandagee, l.-d.	7	7	1	7	1	7
Working, r.	14	201	14	201	14	201
Wick, r.	13	108	13	108	13	108
Sillers, r.	20	151	20	151	20	151
Mares, r.	16	160	16	160	16	160
Morris, r.	14	174	14	174	14	174
Balliett, r.	17	185	17	185	17	185
Landstrum, r.	14	177	14	177	14	177
Sanden, f.-p.	22	186	22	186	22	186
Donaldson, f.-d.	22	186	22	186	22	186
Cram, f.-d.	48	175	48	175	48	175
Urquhart, f.-d.	26	161	26	161	26	161
Hartwig, f.-d.	26	161	26	161	26	161
Sullivan, f.-d.	37	171	37	171	37	171
Baker, f.-d.	22	161	22	161	22	161
Stuewe, l.-d.	5	7	1	7	1	7
Huffaker, r.	21	161	21	161	21	161
Biggs, f.-d.	27	169	27	169	27	169
Heywood, r.	16	131	16	131	16	131
Smith, r.	29	225	29	225	29	225
Clements, f.-p.	28	151	28	151	28	151
Hepner, f.-d.	28	151	28	151	28	151

LEWIS AND CLARKE COUNTY—Continued.

Precincts	Clerk Dist- ict Court	She	Treas'r	Clerk & Record'r	Ass	County Attorney	Superintendent of Schools	Adm'r	Coroner	Surveyor	Auditor	County Commissioners
Wilburn's Station	14	9	2	10	4	11	10	4	3	10	11	Witmer, F.
College Place	38	31	34	37	32	42	31	36	33	30	40	Jacobs, F.
Valley	34	18	32	17	36	33	32	30	28	26	25	Larson, F.
East Helena	168	133	177	193	163	173	166	197	161	164	172	Wegner, d.
French Bar & Spokane	14	2	14	2	15	2	14	3	1	16	16	Hundley, d.
Mitchell	8	6	8	6	7	10	4	9	6	8	10	Hutchinson, d.
Craig	30	19	32	19	23	21	20	24	21	22	22	Hageman, F.
Dearborn	8	6	1	8	2	4	4	23	6	19	17	Sweeney, d.
Hogan	8	16	6	20	7	17	7	2	7	2	8	Farmer, F.
Augusta	8	53	74	73	69	72	69	79	74	69	68	Hinsdale, d.
Dearborn Canyon	6	5	5	5	2	8	3	9	7	6	5	Brooke, d.
Rock Creek Basin	9	15	13	10	14	11	13	16	10	13	12	Hillyer
Middle Fork Dearborn	11	24	14	23	11	23	13	15	12	22	13	Geier, F.
York	34	24	33	31	24	33	23	19	23	19	20	Foley, d.
Canyon Ferry	40	15	49	18	44	14	16	23	39	17	30	Fullerton, F.
Lincoln	34	10	21	17	24	19	23	23	26	16	12	Kelley, d.
Silver Camp	30	4	23	8	30	5	23	6	30	5	4	Rasch, F.
Stemple	7	8	6	5	7	3	6	2	5	4	3	McConnell, d.
Cooper Lake	7	2	3	2	6	3	3	3	3	3	3	Henry, F.
Birds-eye	14	16	21	17	10	16	11	14	12	10	14	Martien, P.
Dickerts	8	1	6	7	1	6	1	6	1	6	7	Hahn, F.
Wolf Creek	25	14	23	17	24	26	20	23	16	18	21	Miller, d.
Total	3728	1911	2264	2337	3631	3196	2379	2160	2544	2314	2231	Shoemaker, F.
Pluralities	311	237	465	419	330	293	253	232	336	284	233	Steele, d.
												Higgins, F.
												O'Connell, d.
												Tibbets, F.
												McRae, d.

PRECINCTS

OFFICIAL ELECTION RETURNS FOR MADISON COUNTY, FOR ELECTION HELD NOVEMBER 8, 1900.

PRECINCTS	Presid'nt	Congress	Governor	Lieut. Gov.	Sec'y of State	Att'y Gen'l	Treasurer	Auditor	Supt of Schools	Assoc. Just. Supreme Ct	Members of Legislature				
											Fine	White	Shoemaker	Rossiter	Page, r.....
Virginia City	102	141	122	102	141	104	119	104	119	104	119	104	119	104	119
Brown's Gulch	6	13	15	4	16	3	14	3	15	3	14	3	15	3	14
Adobetsown	20	42	33	20	42	33	20	42	33	20	42	33	20	42	33
Kennett	9	6	5	10	4	9	4	9	4	9	4	9	4	9	4
Home Park	16	38	33	18	1	33	18	1	33	18	1	33	18	1	33
Blacktail	16	18	15	16	4	15	16	4	15	16	4	15	16	4	15
Monida	44	15	10	43	5	10	43	5	10	43	5	10	43	5	10
Lakeview	20	76	71	20	6	73	27	6	71	28	6	71	28	6	71
Laurin	39	27	27	33	4	26	37	4	26	37	4	26	37	4	26
Taylor's S. House	110	1	101	114	9	111	114	9	111	114	9	111	114	9	111
Sheridan	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
Montana Mine	105	88	71	109	10	70	118	6	78	109	6	78	109	6	78
Twin Bridges	19	14	16	15	17	14	17	14	17	14	17	14	17	14	17
Lindera S. House	22	12	51	22	2	53	24	2	53	24	2	53	24	2	53
Silver Star	21	28	28	21	27	22	27	22	27	22	27	22	27	22	27
Waterloo	7	10	10	7	10	10	7	10	10	7	10	10	7	10	10
Iron Rod	40	19	21	39	7	23	40	7	24	39	7	24	39	7	24
South Boulder	11	13	13	10	3	11	13	3	11	13	3	11	13	3	11
Mayflower	12	14	12	11	11	11	12	11	11	11	11	11	11	11	11
Parrot	123	148	137	126	8	106	116	7	133	124	6	141	128	129	126
Mammoth	14	10	11	12	12	13	12	13	12	13	12	13	12	13	12
Harrison	6	12	14	4	16	3	16	2	14	16	2	14	16	2	14
Sand Creek	13	46	41	19	3	46	16	2	43	19	3	46	16	2	43
Red Bluff	24	64	60	22	7	57	24	4	61	24	5	67	24	5	67
Norris	8	9	8	11	11	8	10	9	10	9	10	9	10	9	10
Revenue	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54
Cherry Creek	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54
Meadow Creek	48	38	37	48	3	40	46	3	40	46	3	40	46	3	40
Washington Bar	48	38	37	48	3	40	46	3	40	46	3	40	46	3	40
Emale	47	70	68	46	3	78	41	3	78	41	3	78	41	3	78
Wigwam	47	70	68	46	3	78	41	3	78	41	3	78	41	3	78
Rochester	47	70	68	46	3	78	41	3	78	41	3	78	41	3	78
Big Hole	47	70	68	46	3	78	41	3	78	41	3	78	41	3	78
Bear Creek	47	70	68	46	3	78	41	3	78	41	3	78	41	3	78
Lyon	47	70	68	46	3	78	41	3	78	41	3	78	41	3	78
Total	100	126	119	109	86	126	95	91	124	110	75	135	103	110	104
Pluralities	100	126	119	109	86	126	95	91	124	110	75	135	103	110	104

MADISON COUNTY—Continued.

[illegible]

PREDICTS

SEVENTH ANNUAL REPORT OF BUREAU

OFFICIAL ELECTION RETURNS FOR MEAGHER COUNTY, FOR ELECTION HELD NOVEMBER 9, 1900.

PRECINCTS.	President	Congress			Governor			Lieut. Gov.			Sec'y State			Att'y. Gen.			Treasurer			Auditor			Supt. Schools			Associate Justice Sup'r Court				
		McKinley, r....	Bryan, d....	Edwards, f.-p....	Edwards, f.-p....	Murray, r....	Kelley, i.-d....	Toole, f.-d....	Folsom, r....	Hogan, i.-d....	Higgins, f.-d....	Bennett, r....	Marion, i.-d....	Hays, f.-d....	Yoder, r....	Donovan, f.-p....	Porter, r....	Stewart, i.-d....	Barret, f.-d....	Edwards, r....	Livingston, i.-d....	Calderhead, f.-p....	Proctor, r....	McLean, i.-d....	Welsh, f.-l....	Harmon, r....	Leamy, i.-d....	Milburn, f.-d....	Von Tobel, r....	Word, i.-d....
Rock Creek	10	3	2	9	3	1	4	8	3	3	9	2	2	9	2	10	3	3	9	2	2	2	2	2	2	2	2	2	2	2
Shannon	6	9	5	5	5	5	10	5	2	2	4	2	3	4	4	4	3	6	4	2	2	6	2	2	2	2	2	2	2	2
Ft. Logan	23	25	30	25	25	2	25	22	3	23	24	46	108	25	22	25	2	22	21	23	23	25	23	23	23	23	23	23	23	23
W. B. Springs	137	171	97	138	138	58	134	153	34	119	139	7	1	127	106	160	49	103	145	103	101	143	141	99	50	50	102	141	52	
Sheep Creek	7	6	6	7	7	6	6	7	6	6	7	1	6	8	5	8	8	6	8	8	8	8	8	8	8	8	8	8	8	
Copper	23	35	12	21	21	23	23	18	23	18	23	19	13	20	13	13	13	9	13	22	13	13	13	14	19	24	13	21	23	
Battle Creek	13	13	10	13	13	2	12	13	2	11	13	2	13	13	9	14	14	3	9	13	2	9	13	1	2	2	10	13	3	
Dorsey	14	4	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	
Castle	24	33	19	22	14	34	20	8	20	25	23	9	31	33	20	23	11	18	21	16	20	21	11	10	10	22	20	9	1	
Comb Creek	19	3	4	18	7	14	7	14	4	5	4	28	4	28	24	23	7	19	37	1	33	37	3	10	9	10	22	20	9	
Martindale	31	41	32	32	9	43	25	7	23	23	26	8	44	28	24	23	7	19	37	1	33	37	3	10	9	10	22	20	9	
Two Dot	3	21	20	38	2	24	35	6	3	3	3	8	21	5	5	8	1	7	7	7	19	37	3	10	9	10	22	20	9	
Big Elk	8	4	6	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	
Hartstown	33	23	17	31	4	26	30	3	21	21	31	1	22	31	18	12	2	9	28	15	17	33	2	15	15	1	13	1	4	
Winnecook	13	2	1	13	1	1	13	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Living Springs	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	
Oka	8	2	1	6	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Total	409	398	351	402	402	118	368	392	81	316	394	91	334	388	271	405	108	290	401	364	402	107	364	408	105	105	105	105	105	105
Pluralities	11	11	11	141	141	118	368	392	81	316	394	91	334	388	271	405	108	290	401	364	402	107	364	408	105	105	105	105	105	105

OF AGRICULTURE, LABOR AND INDUSTRY.

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PRECINCTS	President	Mem. Congress	Governor	Lieut. Gov.	Sec'y State	Att'y Gen.	State Treas.	State Auditor	Supt. Schools	Justice Sup'r Court	Associate Justice Sup'r Court
Missoula, 1.....	165	172	110	108	106	104	102	100	98	96	94
Missoula, 2.....	125	110	98	86	74	62	50	38	26	14	2
Missoula, 3.....	125	110	98	86	74	62	50	38	26	14	2
Missoula, 4.....	125	110	98	86	74	62	50	38	26	14	2
Debniet	125	110	98	86	74	62	50	38	26	14	2
Arice	125	110	98	86	74	62	50	38	26	14	2
Vermillion	125	110	98	86	74	62	50	38	26	14	2
Quartz	125	110	98	86	74	62	50	38	26	14	2
Bonita	125	110	98	86	74	62	50	38	26	14	2
Clinton	125	110	98	86	74	62	50	38	26	14	2
Carton	125	110	98	86	74	62	50	38	26	14	2
Carleton	125	110	98	86	74	62	50	38	26	14	2
Cold Springs	125	110	98	86	74	62	50	38	26	14	2
Baltsee	125	110	98	86	74	62	50	38	26	14	2
Bonner	125	110	98	86	74	62	50	38	26	14	2
Potomac	125	110	98	86	74	62	50	38	26	14	2
Superior	125	110	98	86	74	62	50	38	26	14	2
Plains	125	110	98	86	74	62	50	38	26	14	2
Thompson	125	110	98	86	74	62	50	38	26	14	2
Freemtown	125	110	98	86	74	62	50	38	26	14	2
Grass Valley	125	110	98	86	74	62	50	38	26	14	2
Heron	125	110	98	86	74	62	50	38	26	14	2
Lo Lo	125	110	98	86	74	62	50	38	26	14	2
Martins	125	110	98	86	74	62	50	38	26	14	2
St. Regis	125	110	98	86	74	62	50	38	26	14	2
Trout Creek	125	110	98	86	74	62	50	38	26	14	2
Noxon	125	110	98	86	74	62	50	38	26	14	2
Nine Mile	125	110	98	86	74	62	50	38	26	14	2
Carlan	125	110	98	86	74	62	50	38	26	14	2
Woodman	125	110	98	86	74	62	50	38	26	14	2
Lothrop	125	110	98	86	74	62	50	38	26	14	2
Huson	125	110	98	86	74	62	50	38	26	14	2
Forest	125	110	98	86	74	62	50	38	26	14	2
Totals	125	110	98	86	74	62	50	38	26	14	2
Fluralties	125	110	98	86	74	62	50	38	26	14	2
Von Tobel, r.....	145	132	120	108	96	84	72	60	48	36	24
Ward, l.-d.....	145	132	120	108	96	84	72	60	48	36	24
Milburn, f.-d.....	145	132	120	108	96	84	72	60	48	36	24
Harmon, r.....	145	132	120	108	96	84	72	60	48	36	24
Leamy, l.-d.....	145	132	120	108	96	84	72	60	48	36	24
Welsh, f.-l.....	145	132	120	108	96	84	72	60	48	36	24
Proctor, r.....	145	132	120	108	96	84	72	60	48	36	24
McLean, l.-d.....	145	132	120	108	96	84	72	60	48	36	24
Calderhead, f.-p.....	145	132	120	108	96	84	72	60	48	36	24
Edwards, r.....	145	132	120	108	96	84	72	60	48	36	24
Livingston, l.-d.....	145	132	120	108	96	84	72	60	48	36	24
Barret, f.-d.....	145	132	120	108	96	84	72	60	48	36	24
Porter, r.....	145	132	120	108	96	84	72	60	48	36	24
Stewart, l.-d.....	145	132	120	108	96	84	72	60	48	36	24
Donovan, f.-p.....	145	132	120	108	96	84	72	60	48	36	24
Yoder, r.....	145	132	120	108	96	84	72	60	48	36	24
Hays, l. and f.-d.....	145	132	120	108	96	84	72	60	48	36	24
Bennet, r.....	145	132	120	108	96	84	72	60	48	36	24
Marion, l.-d.....	145	132	120	108	96	84	72	60	48	36	24
Higgins, f.-d.....	145	132	120	108	96	84	72	60	48	36	24
Folsom, r.....	145	132	120	108	96	84	72	60	48	36	24
Hogan, l.-d.....	145	132	120	108	96	84	72	60	48	36	24
Toole, f.-d.....	145	132	120	108	96	84	72	60	48	36	24
Murray, r.....	145	132	120	108	96	84	72	60	48	36	24
Kelley, l.-d.....	145	132	120	108	96	84	72	60	48	36	24
Edwards, f.-p.....	145	132	120	108	96	84	72	60	48	36	24
McKinley, r.....	145	132	120	108	96	84	72	60	48	36	24
Bryan, f.-d.....	145	132	120	108	96	84	72	60	48	36	24

MISSOULA COUNTY—Continued.

PRECINCTS	Members of the Legislature										District Judge	Clerk of Assessor	Clerk of County	Sheriff	Treasurer	Clerk of Assessor										
	Webster, r...	Woody, f-d...	Crawford, f-l...	Lucy, f-d...	Pendergrass, f-l...	Shappard, d...	Kendall, l-d...	Mills, l-d...	Riley, l-d...	Quinn, l-d...							Dixon, r...	Graham, r...	Donlan, r...	Ross, r...	Stoan, d...	Kemp, r...	Tevis, l-d...	Prescott, f-d...	Darbee, r...	Gerrity, l-p...	Higgins, d...	MacLay, d...	Wilkinson, d...	Dickinson, r...	Murray, d...	Gogarty, r...
Missoula, 1...	160	164	117	118	113	106	57	32	43	25	105	146	161	163	123	109	23	109	125	14	214	118	123	121	124	114
Missoula, 2...	109	114	112	115	118	117	50	16	24	17	112	76	100	98	98	121	13	105	121	174	174	174	174	174	174	114
Missoula, 3...	191	247	177	191	191	173	167	30	47	36	220	180	230	213	180	107	44	107	107	27	223	223	223	223	223	122
Missoula, 4...	167	143	123	147	147	144	140	31	51	11	144	111	143	137	106	106	44	106	106	27	223	223	223	223	223	122
DeSmet	15	28	14	19	19	9	12	17	12	11	15	15	15	15	15	15	15	15	15	5	22	22	22	22	22	19
Arlee	9	30	14	19	19	9	12	17	12	11	15	15	15	15	15	15	15	15	15	5	22	22	22	22	22	19
Vernillion	7	10	4	5	5	4	4	4	4	4	14	14	14	14	14	14	14	14	14	5	22	22	22	22	22	19
Quarta	20	31	23	25	27	23	20	17	17	17	24	27	27	27	27	27	27	27	27	5	22	22	22	22	22	19
Bonita	23	36	47	47	47	47	47	47	47	47	27	27	27	27	27	27	27	27	27	5	22	22	22	22	22	19
Clinton	23	36	47	47	47	47	47	47	47	47	27	27	27	27	27	27	27	27	27	5	22	22	22	22	22	19
Carter	10	10	9	7	7	10	9	1	1	1	28	17	22	22	22	22	22	22	22	5	22	22	22	22	22	19
Carleton	19	25	14	29	29	18	2	5	9	3	43	30	34	34	34	34	34	34	34	5	22	22	22	22	22	19
Cold Springs	30	42	24	36	36	28	22	5	9	3	43	30	34	34	34	34	34	34	34	5	22	22	22	22	22	19
Baltese	24	10	14	16	16	14	11	5	12	12	9	100	20	20	20	20	20	20	20	5	22	22	22	22	22	19
Bonner	45	71	13	22	22	15	15	15	15	15	19	17	17	17	17	17	17	17	17	5	22	22	22	22	22	19
Potomac	27	14	25	28	27	22	26	15	15	15	19	17	17	17	17	17	17	17	17	5	22	22	22	22	22	19
Superior	28	49	34	38	38	36	32	28	22	22	38	38	38	38	38	38	38	38	38	5	22	22	22	22	22	19
Plains	119	84	73	74	74	73	67	41	30	26	97	63	61	61	61	61	61	61	61	5	22	22	22	22	22	19
Thompson	47	64	40	37	37	43	37	32	27	27	63	61	61	61	61	61	61	61	61	5	22	22	22	22	22	19
Frenchtown	36	46	49	42	42	36	34	28	27	27	63	61	61	61	61	61	61	61	61	5	22	22	22	22	22	19
Grass Valley	3	14	14	17	17	16	16	6	1	1	15	15	15	15	15	15	15	15	15	5	22	22	22	22	22	19
Heron	15	14	17	17	17	16	16	6	1	1	15	15	15	15	15	15	15	15	15	5	22	22	22	22	22	19
Lo Lo	28	49	49	42	42	36	34	28	27	27	63	61	61	61	61	61	61	61	61	5	22	22	22	22	22	19
Marina	51	52	57	52	52	48	47	8	9	18	50	32	40	40	40	40	40	40	40	5	22	22	22	22	22	19
St. Regis	4	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	5	22	22	22	22	22	19
Trout Creek	67	25	106	99	99	102	12	3	4	2	19	14	51	13	50	50	4	4	4	5	22	22	22	22	22	19
Noxon	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	5	22	22	22	22	22	19
Nine Mile	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	5	22	22	22	22	22	19
Carlan	26	27	59	49	49	54	53	8	1	1	20	20	20	20	20	20	20	20	20	5	22	22	22	22	22	19
Woodman	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	5	22	22	22	22	22	19
Lothrop	26	27	59	49	49	54	53	8	1	1	20	20	20	20	20	20	20	20	20	5	22	22	22	22	22	19
Huson	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	5	22	22	22	22	22	19
Forest	7	5	8	10	10	9	9	9	9	9	17	2	2	2	2	2	2	2	2	5	22	22	22	22	22	19
Totals	1230	1466	1206	1286	1202	1206	529	411	444	459	1483	1063	1207	1287	1065	1013	428	428	170	231	204	1008	1008	1008	1008	1206
Pluralities	1230	1466	1206	1286	1202	1206	529	411	444	459	1483	1063	1207	1287	1065	1013	428	428	170	231	204	1008	1008	1008	1008	1206

MISSOULA COUNTY—Continued.

PRECINCTS	County Attorney			Sup't of Schools		Auditor	County Commissioners	
	Hale, d...	Duncan, l-p	Smith, r.	Shelley, d...	Phelps, l-p		NeSmith, d...	Rohkramer, r...
Missoula, 1	108	104	113	158	147	161	149	160
Missoula, 2	123	48	58	130	119	136	94	159
Missoula, 3	307	110	129	223	223	212	245	233
Missoula, 4	140	112	80	193	143	156	144	198
DeSmet	10	15	26	36	32	32	31	31
Arlee	8	4	24	45	32	34	32	31
Vermillion	17	11	27	24	24	23	25	21
Quarts	17	11	27	24	24	23	25	21
Bonita	27	27	16	11	11	10	10	10
Clinton	11	6	11	11	11	10	10	10
Carleton	11	23	12	24	23	19	25	25
Cold Spring	11	23	12	24	23	19	25	25
Saltese	14	13	8	23	23	21	25	24
Bonner	73	29	16	66	64	60	60	60
Fotomac	24	23	5	39	32	29	15	86
Plains	23	23	5	39	32	29	15	86
Thompson	73	29	16	66	64	60	60	60
Frenchtown	24	23	5	39	32	29	15	86
Grass Valley	23	23	5	39	32	29	15	86
Heron	73	29	16	66	64	60	60	60
Lo Lo	24	23	5	39	32	29	15	86
Martina	23	23	5	39	32	29	15	86
St. Regis	73	29	16	66	64	60	60	60
Trout Creek	24	23	5	39	32	29	15	86
Noxon	23	23	5	39	32	29	15	86
Nine Mile	73	29	16	66	64	60	60	60
Carlan	24	23	5	39	32	29	15	86
Woodman	23	23	5	39	32	29	15	86
Lothrop	73	29	16	66	64	60	60	60
Husen	24	23	5	39	32	29	15	86
Forest	23	23	5	39	32	29	15	86
Totals	1500	1163	798	1795	1463	1781	1349	2011
Pluralities	87	87	87	87	87	87	87	87

PRECINCTS

OFFICIAL ELECTION RETURNS FOR PARK COUNTY, FOR ELECTION HELD NOVEMBER 6, 1906.

	President	Congress	Governor	Lieut. Governor	Sec'y State	Att'y General	State Treasurer	Auditor	State Supt.	Asso. Justice
Livingston, 1st ward.....	125	115	130	138	116	106	85	90	119	3
Livingston, 2d ward.....	115	107	116	138	123	140	79	111	123	104
Livingston, 3d ward.....	114	94	106	138	111	85	77	91	123	103
Cokedale	4	16	14	7	6	13	23	5	14	6
Fridley	41	32	37	28	35	23	23	5	24	2
Tom Miner Basin	12	13	14	1	13	13	6	12	13	1
Horr	42	39	35	5	43	39	16	12	13	1
Glenn	77	87	43	11	78	79	61	45	11	1
Alldridge	16	10	13	1	14	11	7	13	12	1
Gardner	21	26	15	23	11	25	7	11	13	1
Cooke	16	10	14	9	11	25	7	11	13	1
Bear Gulch	65	52	70	45	70	45	12	64	45	64
Chico	96	72	81	74	25	23	13	9	13	1
Cascade, South	21	11	11	1	25	24	6	24	13	2
Richland	26	10	10	8	25	24	13	9	13	1
Trail Creek	36	27	30	3	22	34	11	18	16	1
Mission, Upper	5	14	3	13	4	12	4	4	14	1
Mission, Lower	16	11	15	6	19	19	4	17	15	1
West Boulder	3	19	6	12	6	13	5	6	13	2
Contact	8	1	1	8	8	1	1	7	1	1
Hunters Hot Springs	13	8	10	7	12	8	1	11	8	2
Shields River	52	44	50	4	46	50	24	45	50	47
Cottonwood	10	10	10	7	10	10	10	10	10	7
Myersburg	9	19	7	11	8	15	4	10	15	4
Murphree	10	18	10	13	9	13	8	10	13	10
Muir	4	4	3	4	12	1	6	9	2	3
Lat.	17	16	11	13	15	15	10	13	23	1
Cascade, North	904	907	907	811	882	816	506	742	840	738
Total	3	72	121	127	66	95	63	83	167	16
Pluralities										

PRECINCTS

PARK COUNTY—Continued.

Precincts.	Judge 6th Dist.	State Senator		Members of Legislature		Treasurer	Sheriff	Assessor	Clerk & Rec'r	County Clerk	County Supt		
Livingston, 1st ward....	110	128	130	106	14	101	114	114	112	141	117	128	132
Livingston, 2d ward....	120	122	124	108	16	103	116	116	114	119	120	122	126
Livingston, 3d ward....	118	120	122	106	14	101	114	114	112	141	117	128	132
Cokedale	4	32	34	17	53	55	57	59	61	63	65	67	69
Fridley	32	34	36	17	53	55	57	59	61	63	65	67	69
Tom Miner Basin	48	50	52	27	29	31	33	35	37	39	41	43	45
Horr	12	14	16	27	29	31	33	35	37	39	41	43	45
Aldridge	12	14	16	27	29	31	33	35	37	39	41	43	45
Cinnabar	14	16	18	27	29	31	33	35	37	39	41	43	45
Gardiner	14	16	18	27	29	31	33	35	37	39	41	43	45
Cooke	14	16	18	27	29	31	33	35	37	39	41	43	45
Bear Gulch	14	16	18	27	29	31	33	35	37	39	41	43	45
Chico	14	16	18	27	29	31	33	35	37	39	41	43	45
Cascade, South	14	16	18	27	29	31	33	35	37	39	41	43	45
Richland	14	16	18	27	29	31	33	35	37	39	41	43	45
Trail Creek	14	16	18	27	29	31	33	35	37	39	41	43	45
Mission, Lower	14	16	18	27	29	31	33	35	37	39	41	43	45
Mission, Upper	14	16	18	27	29	31	33	35	37	39	41	43	45
West Boulder	14	16	18	27	29	31	33	35	37	39	41	43	45
Contact	14	16	18	27	29	31	33	35	37	39	41	43	45
Hunters Hot Springs	14	16	18	27	29	31	33	35	37	39	41	43	45
Shields River	14	16	18	27	29	31	33	35	37	39	41	43	45
Cottonwood	14	16	18	27	29	31	33	35	37	39	41	43	45
Myersburg	14	16	18	27	29	31	33	35	37	39	41	43	45
Muir	14	16	18	27	29	31	33	35	37	39	41	43	45
Lat., ...	14	16	18	27	29	31	33	35	37	39	41	43	45
Cascade, North	14	16	18	27	29	31	33	35	37	39	41	43	45
Total	799	1023	1023	799	1023	1023	1023	799	1023	1023	1023	1023	1023
Pluralities	799	1023	1023	799	1023	1023	1023	799	1023	1023	1023	1023	1023
Mrs. Colvin, d....	122	124	126	128	130	132	134	136	138	140	142	144	146
Wilson, r....	122	124	126	128	130	132	134	136	138	140	142	144	146
Miller, s-r....	122	124	126	128	130	132	134	136	138	140	142	144	146
Davis, r....	122	124	126	128	130	132	134	136	138	140	142	144	146
Bailey, d....	122	124	126	128	130	132	134	136	138	140	142	144	146
Angus, r....	122	124	126	128	130	132	134	136	138	140	142	144	146
Robinson, d....	122	124	126	128	130	132	134	136	138	140	142	144	146
Daniels, r....	122	124	126	128	130	132	134	136	138	140	142	144	146
Proffitt, d....	122	124	126	128	130	132	134	136	138	140	142	144	146
Robertson, r....	122	124	126	128	130	132	134	136	138	140	142	144	146
Beley, d....	122	124	126	128	130	132	134	136	138	140	142	144	146
Gustine, ind....	122	124	126	128	130	132	134	136	138	140	142	144	146
Young, s-r....	122	124	126	128	130	132	134	136	138	140	142	144	146
Chambers, r....	122	124	126	128	130	132	134	136	138	140	142	144	146
Roth, d....	122	124	126	128	130	132	134	136	138	140	142	144	146
Ferte, p....	122	124	126	128	130	132	134	136	138	140	142	144	146
Orr, s-r....	122	124	126	128	130	132	134	136	138	140	142	144	146
Wetstein, s-r....	122	124	126	128	130	132	134	136	138	140	142	144	146
Phelps, r....	122	124	126	128	130	132	134	136	138	140	142	144	146
Stark, r....	122	124	126	128	130	132	134	136	138	140	142	144	146
Swindlehurst, d....	122	124	126	128	130	132	134	136	138	140	142	144	146
Myers, d....	122	124	126	128	130	132	134	136	138	140	142	144	146
Kelly, l-d....	122	124	126	128	130	132	134	136	138	140	142	144	146
Thompson, r....	122	124	126	128	130	132	134	136	138	140	142	144	146
Conrow, r....	122	124	126	128	130	132	134	136	138	140	142	144	146
Poorman, r....	122	124	126	128	130	132	134	136	138	140	142	144	146
Henry, d....	122	124	126	128	130	132	134	136	138	140	142	144	146

PARK COUNTY—Continued.

Sept.	County Commissioners	Recorder	Surv.	Feb. Adm.
66	Glenn, F.	Leard, F.	131	Yeaton, F.
115	Ebert, d.	Leopold, d.	139	Cameron, d.
102	Brady, d.	Gilchrist, peoples ...	172	Crookes, F.
100	Kane, d.	Jones, peoples.	177	
83	Krieger, F.	Culley, A. F.	180	
82	Trager, F.	McCartney, A. F.	181	
81	Gibson, ...	Locke, A. F.	182	
80	Gibson, ...	Gibson, ...	183	
79	Gibson, ...	Gibson, ...	184	
78	Gibson, ...	Gibson, ...	185	
77	Gibson, ...	Gibson, ...	186	
76	Gibson, ...	Gibson, ...	187	
75	Gibson, ...	Gibson, ...	188	
74	Gibson, ...	Gibson, ...	189	
73	Gibson, ...	Gibson, ...	190	
72	Gibson, ...	Gibson, ...	191	
71	Gibson, ...	Gibson, ...	192	
70	Gibson, ...	Gibson, ...	193	
69	Gibson, ...	Gibson, ...	194	
68	Gibson, ...	Gibson, ...	195	
67	Gibson, ...	Gibson, ...	196	
66	Gibson, ...	Gibson, ...	197	
65	Gibson, ...	Gibson, ...	198	
64	Gibson, ...	Gibson, ...	199	
63	Gibson, ...	Gibson, ...	200	
62	Gibson, ...	Gibson, ...	201	
61	Gibson, ...	Gibson, ...	202	
60	Gibson, ...	Gibson, ...	203	
59	Gibson, ...	Gibson, ...	204	
58	Gibson, ...	Gibson, ...	205	
57	Gibson, ...	Gibson, ...	206	
56	Gibson, ...	Gibson, ...	207	
55	Gibson, ...	Gibson, ...	208	
54	Gibson, ...	Gibson, ...	209	
53	Gibson, ...	Gibson, ...	210	
52	Gibson, ...	Gibson, ...	211	
51	Gibson, ...	Gibson, ...	212	
50	Gibson, ...	Gibson, ...	213	
49	Gibson, ...	Gibson, ...	214	
48	Gibson, ...	Gibson, ...	215	
47	Gibson, ...	Gibson, ...	216	
46	Gibson, ...	Gibson, ...	217	
45	Gibson, ...	Gibson, ...	218	
44	Gibson, ...	Gibson, ...	219	
43	Gibson, ...	Gibson, ...	220	
42	Gibson, ...	Gibson, ...	221	
41	Gibson, ...	Gibson, ...	222	
40	Gibson, ...	Gibson, ...	223	
39	Gibson, ...	Gibson, ...	224	
38	Gibson, ...	Gibson, ...	225	
37	Gibson, ...	Gibson, ...	226	
36	Gibson, ...	Gibson, ...	227	
35	Gibson, ...	Gibson, ...	228	
34	Gibson, ...	Gibson, ...	229	
33	Gibson, ...	Gibson, ...	230	
32	Gibson, ...	Gibson, ...	231	
31	Gibson, ...	Gibson, ...	232	
30	Gibson, ...	Gibson, ...	233	
29	Gibson, ...	Gibson, ...	234	
28	Gibson, ...	Gibson, ...	235	
27	Gibson, ...	Gibson, ...	236	
26	Gibson, ...	Gibson, ...	237	
25	Gibson, ...	Gibson, ...	238	
24	Gibson, ...	Gibson, ...	239	
23	Gibson, ...	Gibson, ...	240	
22	Gibson, ...	Gibson, ...	241	
21	Gibson, ...	Gibson, ...	242	
20	Gibson, ...	Gibson, ...	243	
19	Gibson, ...	Gibson, ...	244	
18	Gibson, ...	Gibson, ...	245	
17	Gibson, ...	Gibson, ...	246	
16	Gibson, ...	Gibson, ...	247	
15	Gibson, ...	Gibson, ...	248	
14	Gibson, ...	Gibson, ...	249	
13	Gibson, ...	Gibson, ...	250	
12	Gibson, ...	Gibson, ...	251	
11	Gibson, ...	Gibson, ...	252	
10	Gibson, ...	Gibson, ...	253	
9	Gibson, ...	Gibson, ...	254	
8	Gibson, ...	Gibson, ...	255	
7	Gibson, ...	Gibson, ...	256	
6	Gibson, ...	Gibson, ...	257	
5	Gibson, ...	Gibson, ...	258	
4	Gibson, ...	Gibson, ...	259	
3	Gibson, ...	Gibson, ...	260	
2	Gibson, ...	Gibson, ...	261	
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SEVENTH ANNUAL REPORT OF BUREAU

RAVALLI COUNTY—Continued.

[illegible]

PREDICTS

Precincts	Congress	Governor	Lieutenant Governor	Secretary of State	Auditor		Superintendent of Schools
					Treasurer	Auditor	
Leamy, I.-d....	113	79	113	113	113	113	113
Welsh, f.-l....	113	79	113	113	113	113	113
Harmon, r....	113	79	113	113	113	113	113
McLean, I.-d....	113	79	113	113	113	113	113
Calderhead, f.-p....	113	79	113	113	113	113	113
Proctor, r....	113	79	113	113	113	113	113
Livingston, I.-d....	113	79	113	113	113	113	113
Barret, f.-d....	113	79	113	113	113	113	113
Edwards, r....	113	79	113	113	113	113	113
Stewart, I.-d....	113	79	113	113	113	113	113
Donovan, f.-p....	113	79	113	113	113	113	113
Porter, r....	113	79	113	113	113	113	113
Hays, I. and f.-d..	113	79	113	113	113	113	113
Yoder, r....	113	79	113	113	113	113	113
Marion, I.-d....	113	79	113	113	113	113	113
Higgins, f.-d....	113	79	113	113	113	113	113
Bonnett, r....	113	79	113	113	113	113	113
Hogan, I.-d....	113	79	113	113	113	113	113
Toole, f.-d....	113	79	113	113	113	113	113
Folsom, r....	113	79	113	113	113	113	113
Murray, r....	113	79	113	113	113	113	113
Edwards, f.-p....	113	79	113	113	113	113	113
Kelley, I.-d....	113	79	113	113	113	113	113
Ielser, d....	113	79	113	113	113	113	113
O'Shea, d....	113	79	113	113	113	113	113
Morris, d....	113	79	113	113	113	113	113
McCormick, r....	113	79	113	113	113	113	113
Kessler, r....	113	79	113	113	113	113	113
Wilson, r....	113	79	113	113	113	113	113

SEVENTH ANNUAL REPORT OF BUREAU

SILVER BOW COUNTY-Continued.

PRECINCTS	County Atty			County Commissioners			Superintendent of Schools		
	Associate Justice	Sheriff	Clerk and Recorder	Treasurer	Cit' of Court	Assessor	County Atty	County Commissioners	Superintendent of Schools
Miss Downay, I.....	30	20	20	20	20	20	20	20	20
Newill, r.....	20	20	20	20	20	20	20	20	20
Miss Mullins, f.....	20	20	20	20	20	20	20	20	20
Copenhaver, I.....	20	20	20	20	20	20	20	20	20
Cronin, I-d.....	20	20	20	20	20	20	20	20	20
McArthur, I-d.....	20	20	20	20	20	20	20	20	20
Davidson, r.....	20	20	20	20	20	20	20	20	20
Elvers, r.....	20	20	20	20	20	20	20	20	20
Reynolds, r.....	20	20	20	20	20	20	20	20	20
Hagerty, f.....	20	20	20	20	20	20	20	20	20
Peoples, f.....	20	20	20	20	20	20	20	20	20
Clark, f.....	20	20	20	20	20	20	20	20	20
Lamb, I-d.....	20	20	20	20	20	20	20	20	20
Kohl, r.....	20	20	20	20	20	20	20	20	20
Breen, f.....	20	20	20	20	20	20	20	20	20
Laurandau, I.....	20	20	20	20	20	20	20	20	20
Lyford, r.....	20	20	20	20	20	20	20	20	20
Brown, f.....	20	20	20	20	20	20	20	20	20
Leonard, I-d.....	20	20	20	20	20	20	20	20	20
Lloyd, r.....	20	20	20	20	20	20	20	20	20
Roberts, f.....	20	20	20	20	20	20	20	20	20
Holland, I-d.....	20	20	20	20	20	20	20	20	20
Cook, r.....	20	20	20	20	20	20	20	20	20
Maier, f.....	20	20	20	20	20	20	20	20	20
Moran, I-d.....	20	20	20	20	20	20	20	20	20
Ford, r.....	20	20	20	20	20	20	20	20	20
Weston, f.....	20	20	20	20	20	20	20	20	20
Murphy, I-d.....	20	20	20	20	20	20	20	20	20
Young, r.....	20	20	20	20	20	20	20	20	20
Furey, f.....	20	20	20	20	20	20	20	20	20
Word, I-d.....	20	20	20	20	20	20	20	20	20
Milburn, f-d.....	20	20	20	20	20	20	20	20	20
Von Tobel, r.....	20	20	20	20	20	20	20	20	20
Totals	3536	3174	4610	3115	3214	4817	7090	3003	4871

SILVER BOW COUNTY—Continued.

Precincts	Members of the Legislature				
	Andlor	Croser	Administrator	Surveyor	Judicial District
1.	78	86	109	85	110
2.	87	44	67	80	114
3.	84	51	103	87	110
4.	120	116	247	93	106
5.	102	116	222	97	104
6.	81	57	116	76	103
7.	81	57	116	76	103
8.	81	57	116	76	103
9.	81	57	116	76	103
10.	81	57	116	76	103
11.	81	57	116	76	103
12.	81	57	116	76	103
13.	81	57	116	76	103
14.	81	57	116	76	103
15.	81	57	116	76	103
16.	81	57	116	76	103
17.	81	57	116	76	103
18.	81	57	116	76	103
19.	81	57	116	76	103
20.	81	57	116	76	103
21.	81	57	116	76	103
22.	81	57	116	76	103
23.	81	57	116	76	103
24.	81	57	116	76	103
25.	81	57	116	76	103
26.	81	57	116	76	103
27.	81	57	116	76	103
28.	81	57	116	76	103
29.	81	57	116	76	103
30.	81	57	116	76	103
31.	81	57	116	76	103
32.	81	57	116	76	103
33.	81	57	116	76	103
34.	81	57	116	76	103
35.	81	57	116	76	103
36.	81	57	116	76	103
37.	81	57	116	76	103
38.	81	57	116	76	103
39.	81	57	116	76	103
40.	81	57	116	76	103
41.	81	57	116	76	103
42.	81	57	116	76	103
43.	81	57	116	76	103
44.	81	57	116	76	103
45.	81	57	116	76	103
46.	81	57	116	76	103
47.	81	57	116	76	103
48.	81	57	116	76	103
49.	81	57	116	76	103
50.	81	57	116	76	103
51.	81	57	116	76	103
52.	81	57	116	76	103
53.	81	57	116	76	103
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56.	81	57	116	76	103
57.	81	57	116	76	103
58.	81	57	116	76	103
59.	81	57	116	76	103
60.	81	57	116	76	103
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62.	81	57	116	76	103
63.	81	57	116	76	103
64.	81	57	116	76	103
65.	81	57	116	76	103
66.	81	57	116	76	103
67.	81	57	116	76	103
68.	81	57	116	76	103
69.	81	57	116	76	103
70.	81	57	116	76	103
71.	81	57	116	76	103
72.	81	57	116	76	103
73.	81	57	116	76	103
74.	81	57	116	76	103
75.	81	57	116	76	103
76.	81	57	116	76	103
77.	81	57	116	76	103
78.	81	57	116	76	103
79.	81	57	116	76	103
80.	81	57	116	76	103
81.	81	57	116	76	103
82.	81	57	116	76	103
83.	81	57	116	76	103
84.	81	57	116	76	103
85.	81	57	116	76	103
86.	81	57	116	76	103
87.	81	57	116	76	103
88.	81	57	116	76	103
89.	81	57	116	76	103
90.	81	57	116	76	103
91.	81	57	116	76	103
92.	81	57	116	76	103
93.	81	57	116	76	103
94.	81	57	116	76	103
95.	81	57	116	76	103
96.	81	57	116	76	103
97.	81	57	116	76	103
98.	81	57	116	76	103
99.	81	57	116	76	103
100.	81	57	116	76	103

SEVENTH ANNUAL REPORT OF BUREAU

SILVER BOW COUNTY--Continued.

Precinct	Auditor	Coroner	Admlstr't'r	Surveyor	Judges ad Judicial District		Members of the Legislature	
					1st	2d	1st	2d
7	319	71	66	311	65	221	329	
8	327	201	50	254	19	109	167	
9	340	181	109	167	13	81	98	
10	349	131	81	98	7	80	189	
11	354	131	81	98	7	80	189	
12	354	131	81	98	7	80	189	
13	354	131	81	98	7	80	189	
14	354	131	81	98	7	80	189	
15	354	131	81	98	7	80	189	
16	354	131	81	98	7	80	189	
17	354	131	81	98	7	80	189	
18	354	131	81	98	7	80	189	
19	354	131	81	98	7	80	189	
20	354	131	81	98	7	80	189	
21	354	131	81	98	7	80	189	
22	354	131	81	98	7	80	189	
23	354	131	81	98	7	80	189	
24	354	131	81	98	7	80	189	
25	354	131	81	98	7	80	189	
26	354	131	81	98	7	80	189	
27	354	131	81	98	7	80	189	
28	354	131	81	98	7	80	189	
29	354	131	81	98	7	80	189	
30	354	131	81	98	7	80	189	
31	354	131	81	98	7	80	189	
32	354	131	81	98	7	80	189	
33	354	131	81	98	7	80	189	
34	354	131	81	98	7	80	189	
35	354	131	81	98	7	80	189	
36	354	131	81	98	7	80	189	
37	354	131	81	98	7	80	189	
38	354	131	81	98	7	80	189	
39	354	131	81	98	7	80	189	
40	354	131	81	98	7	80	189	
41	354	131	81	98	7	80	189	
42	354	131	81	98	7	80	189	
43	354	131	81	98	7	80	189	
44	354	131	81	98	7	80	189	
45	354	131	81	98	7	80	189	
46	354	131	81	98	7	80	189	
47	354	131	81	98	7	80	189	
48	354	131	81	98	7	80	189	
49	354	131	81	98	7	80	189	
50	354	131	81	98	7	80	189	
51	354	131	81	98	7	80	189	
52	354	131	81	98	7	80	189	
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64	354	131	81	98	7	80	189	
65	354	131	81	98	7	80	189	
66	354	131	81	98	7	80	189	
67	354	131	81	98	7	80	189	
68	354	131	81	98	7	80	189	
69	354	131	81	98	7	80	189	
70	354	131	81	98	7	80	189	
71	354	131	81	98	7	80	189	
72	354	131	81	98	7	80	189	
73	354	131	81	98	7	80	189	
74	354	131	81	98	7	80	189	
75	354	131	81	98	7	80	189	
76	354	131	81	98	7	80	189	
77	354	131	81	98	7	80	189	
78	354	131	81	98	7	80	189	
79	354	131	81	98	7	80	189	
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82	354	131	81	98	7	80	189	
83	354	131	81	98	7	80	189	
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85	354	131	81	98	7	80	189	
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93	354	131	81	98	7	80	189	
94	354	131	81	98	7	80	189	
95	354	131	81	98	7	80	189	
96	354	131	81	98	7	80	189	
97	354	131	81	98	7	80	189	
98	354	131	81	98	7	80	189	
99	354	131	81	98	7	80	189	
100	354	131	81	98	7	80	189	
Total								

SILVER BOW COUNTY—Continued.

Members of the Legislature

PRECINCTS	Noon, l.-d.	Scanlon, l.-d.	O'Farrell, l.-d.	Phelan, l.-d.	Alley, l.-d.	Hughes, l.-d.	Winchell, l.-d.	Miles, F.	Dyer, F.	Ellingwood, F.	Blinn, F.	Glard, F.	Berger, F.	Davis, F.	Clark, F.	Driscoll, F.	Pascos, F.	Hodges, F.	Morley, F.
1.....	111	111	112	111	111	112	109	72	72	73	73	73	73	71	73	73	73	75	77
2.....	71	66	67	69	68	68	64	42	41	41	42	44	40	40	45	43	41	40	41
3.....	106	108	106	105	100	102	98	28	28	29	30	28	27	27	27	28	29	29	26
4.....	248	247	251	250	243	248	238	68	63	72	71	74	72	72	69	69	77	71	68
5.....	224	223	229	227	217	226	220	112	115	111	112	112	110	111	112	114	116	128	107
6.....	115	115	120	118	114	116	114	13	22	22	23	22	21	21	21	24	23	23	21
7.....	196	188	191	185	183	184	174	38	40	36	36	37	35	37	30	40	36	36	36
8.....	29	29	29	29	29	29	29	71	72	73	72	71	68	71	72	68	72	69	68
9.....	292	292	293	290	287	289	289	87	86	85	83	81	83	83	83	87	85	87	86
10.....	261	257	264	265	260	261	252	94	94	99	94	104	99	102	96	100	99	99	102
11.....	187	178	177	191	173	171	172	79	79	79	82	81	81	81	79	90	82	80	84
12.....	293	293	293	301	290	301	297	61	62	62	65	69	62	62	60	65	67	66	64
13.....	157	156	157	157	156	155	155	85	82	84	85	83	84	84	85	85	97	87	84
14.....	282	283	284	281	276	281	275	85	85	84	85	86	77	83	80	82	82	76	87
15.....	307	306	308	307	305	306	305	47	46	46	48	47	46	48	46	46	47	45	46
16.....	107	100	105	119	106	105	101	74	75	75	83	86	77	83	80	82	82	76	87
17.....	96	91	95	96	91	96	91	121	117	122	119	129	124	126	125	125	124	119	125
18.....	50	42	47	52	42	43	48	57	57	64	58	61	59	59	64	56	60	55	64
19.....	160	160	167	162	159	166	159	118	119	120	121	126	118	118	119	121	123	126	121
20.....	169	169	171	179	170	175	165	109	105	110	107	112	105	106	105	104	110	109	109
21.....	158	147	155	158	153	153	147	136	132	130	131	141	131	137	131	136	127	136	136
22.....	94	79	81	88	74	79	76	89	86	89	60	70	64	62	65	67	65	68	64
23.....	121	119	120	119	122	125	119	96	96	100	97	99	100	102	99	99	108	99	99
24.....	15	16	16	17	18	16	17	42	42	43	49	45	42	44	45	41	42	42	41
25.....	90	87	85	86	84	87	86	98	91	101	97	99	101	99	100	97	102	99	99
26.....	106	102	103	105	105	107	104	107	103	125	117	122	116	115	118	118	119	119	115
27.....	68	66	64	61	60	64	60	65	65	67	68	68	63	63	69	67	66	72	65
28.....	18	19	19	20	19	19	19	194	194	195	196	195	196	197	196	196	194	194	194
29.....	11	11	11	11	11	11	11	52	54	54	54	53	54	53	54	53	52	53	54
30.....	7	7	7	7	7	7	7	12	12	12	12	12	12	12	12	12	12	12	12
31.....	30	40	38	40	36	36	36	89	89	87	86	87	86	86	87	85	86	91	88
32.....	22	21	22	21	23	25	21	48	44	45	56	45	42	44	43	44	47	48	43
33.....	11	9	11	10	12	11	10	60	61	64	65	63	63	61	63	64	66	64	68
34.....	25	25	29	31	25	30	25	33	34	35	37	35	33	34	35	35	35	34	35
35.....	7	7	7	7	7	6	7	6	2	2	2	3	3	3	3	3	3	3	3
36.....	9	9	9	9	9	9	9	6	5	5	5	6	6	6	6	6	6	6	6
37.....	1	1	1	1	1	1	1	3	3	3	3	4	3	3	3	3	3	3	3
38.....	3	4	4	4	3	3	3	16	12	14	12	12	11	12	11	14	11	14	12
39.....	4	4	4	4	3	5	4	4	22	23	20	21	20	21	22	21	24	21	21
40.....	7	7	7	7	7	7	7	10	5	5	5	5	4	4	4	4	4	4	4
41.....	23	25	23	20	20	20	20	4	4	5	7	7	7	7	7	7	7	7	7
42.....	8	8	8	8	8	8	8	5	5	5	5	5	5	5	5	5	5	5	5
43.....	9	9	9	9	9	9	9	5	5	5	16	16	16	16	16	15	16	16	16
44.....	10	10	10	10	10	10	10	9	19	16	2	1	2	2	2	2	2	2	2
45.....	4	3	3	3	2	3	2	1	...	1	25	25	25	25	25	25	25	25	25
46.....	1	1	1	1	1	1	1	4	6	5	5	5	5	5	5	5	5	5	5
47.....	4	4	4	4	5	3	4	2	2	1	1	1	1	1	1	1	1	1	1
48.....	2	2	2	2	2	2	2	1	1	1	107	102	103	106	108	101	106	108	104
49.....	72	71	76	76	77	74	71	102	102	107	107	102	103	106	108	101	106	108	104
50.....	120	117	120	118	118	118	115	6	7	6	6	6	7	6	6	6	6	6	7
Totals ...	4542	4460	4537	4592	4434	4506	4385	2715	2705	2731	2766	2797	2710	2750	2737	2763	2794	2789	2741

SWEET GRASS COUNTY—Continued.

	Judge 4th District Court	Senator	Member of Legislature	Clerk Dist. C'n	Sheriff	Treasurer	Clerk & Record'r	Assess'r	County Attorney	Superintendent of Schools	Admiral	County Commissioner	Surveyor
Precincts													
Henry, d.	129												
Poorman, r.	128	121	123	124	125	126	127	128	129	130	131	132	133
Hannah, d.	127	120	122	123	124	125	126	127	128	129	130	131	132
Kelley, r.	126	119	121	122	123	124	125	126	127	128	129	130	131
DeHart, d.	125	118	120	121	122	123	124	125	126	127	128	129	130
Brownlee, r.	124	117	119	120	121	122	123	124	125	126	127	128	129
Beasley, ...	123	116	118	119	120	121	122	123	124	125	126	127	128
Mjelde, d.	122	115	117	118	119	120	121	122	123	124	125	126	127
Skillman, r.	121	114	116	117	118	119	120	121	122	123	124	125	126
Lee, d.	120	113	115	116	117	118	119	120	121	122	123	124	125
Falling, r.	119	112	114	115	116	117	118	119	120	121	122	123	124
Harrison, d.	118	111	113	114	115	116	117	118	119	120	121	122	123
Geiger, r.	117	110	112	113	114	115	116	117	118	119	120	121	122
Bryant, d.	116	109	111	112	113	114	115	116	117	118	119	120	121
Moore, r.	115	108	110	111	112	113	114	115	116	117	118	119	120
Hoak, d.	114	107	109	110	111	112	113	114	115	116	117	118	119
Hathaway, r.	113	106	108	109	110	111	112	113	114	115	116	117	118
Hatch, d.	112	105	107	108	109	110	111	112	113	114	115	116	117
Hall, r.	111	104	106	107	108	109	110	111	112	113	114	115	116
Walker, d.	110	103	105	106	107	108	109	110	111	112	113	114	115
Merrilees, r.	109	102	104	105	106	107	108	109	110	111	112	113	114
Yule, r.	108	101	103	104	105	106	107	108	109	110	111	112	113
Bliss, d.	107	100	102	103	104	105	106	107	108	109	110	111	112
Michaels, d.	106	99	101	102	103	104	105	106	107	108	109	110	111
Thompson, d.	105	98	100	101	102	103	104	105	106	107	108	109	110
Irvin, r.	104	97	99	100	101	102	103	104	105	106	107	108	109
Nevin, r.	103	96	98	99	100	101	102	103	104	105	106	107	108
McConnell, r.	102	95	97	98	99	100	101	102	103	104	105	106	107
Craft, d.	101	94	96	97	98	99	100	101	102	103	104	105	106
Wolvoord, ...	100	93	95	96	97	98	99	100	101	102	103	104	105
Total	304	432	448	458	468	478	488	498	508	518	528	538	548
Pluralities	304	432	448	458	468	478	488	498	508	518	528	538	548

OFFICIAL ELECTION RETURNS FOR TETON COUNTY FOR ELECTION HELD NOVEMBER 6, 1900.

PRECINCTS	President		Congress	Governor		Lieut. Governor		Secretary of State		Att'y Gener'l		Treasurer	Auditor		Superintendent of Schools	Assoc. Just. Supreme Ct.		Judge of Dist.												
	Bryan, f.-d..	McKinley, r....		Hogon, i.-d....	Folsom, r....	Higgins, f.-d....	Bennett, r....	Marion, i.-d....	Hays, i. & f.d....	Yoder, r ..	Donovan, f.p...		Porter, r....	Stewart, i.-d...		Barret, f.-d....	Edwards, r....		Livingston, i.d...	Calderhead, f.p.	Proctor, r.	McLean, i.-d....	Welsh, f.-l....	Harmon, r....	Leamy, i.-d....	Milburn, f.-d..	Von Tobel, r...	Word, i.-d....	Smith, d....	Nofsinger, r....
Choteau	128	32	58	128	6	80	115	8	88	127	7	95	126	90	125	6	87	128	7	83	126	7	88	127	6	91	124	8	102	126
Burton	50	9	9	47	1	12	47	1	14	21	1	10	47	9	48	1	9	48	1	9	48	1	9	48	1	10	47	1	12	47
Bynum	21	14	13	21	8	1	14	8	1	14	21	14	21	14	21	8	1	14	21	1	14	21	1	14	21	14	21	1	17	19
Lake Basin	8	3	3	8	1	2	8	1	1	2	8	1	2	8	1	1	1	2	8	1	1	2	8	1	1	2	8	1	2	9
Lowery	12	15	16	7	2	20	8	2	15	9	1	17	8	12	13	1	11	10	1	15	9	1	12	12	1	15	9	1	15	10
Robare	67	79	76	70	3	78	70	3	78	67	3	79	68	76	68	3	76	70	3	76	68	2	76	68	2	76	68	2	50	65
Shelby	42	84	65	38	18	72	36	18	79	38	9	87	38	79	49	7	80	38	7	75	44	7	76	43	7	78	39	9	89	88
Sweet Grass	7	2	2	7	4	6	4	6	3	6	4	...	39	57	59	...	34	62	1	37	58	1	36	60	1	38	59	2	45	54
St. Mary's	58	41	50	61	4	58	3	39	57	6	...	67	100	64	100	4	60	103	3	62	103	3	63	99	3	60	99	3	90	81
Dupuyer	106	62	55	105	4	67	101	5	63	100	6	6	6	6	6	4	6	6	1	11	13	1	11	13	1	11	13	1	15	12
Collins	6	5	5	6	6	4	6	6	6	6	6	11	14	11	14	1	11	13	1	11	13	1	11	13	1	11	13	1	15	12
Raymond	14	11	12	12	1	12	12	1	12	12	2	11	14	11	14	1	11	13	1	11	13	1	11	13	1	11	13	1	15	12
North Fork	7	14	4	6	4	6	4	6	4	6	4	6	4	6	4	6	4	6	1	6	4	6	4	6	4	6	4	6	5	6
Bellevue	16	17	16	16	...	17	15	...	17	15	...	17	15	16	16	...	17	15	...	17	15	...	17	15	...	18	14	...	22	10
Pondera	32	19	30	32	1	19	32	1	18	32	1	21	31	31	32	2	21	32	1	19	32	1	19	32	1	19	32	1	24	23
Total	574	457	423	565	37	457	543	45	446	551	30	472	550	441	551	36	435	550	26	47	525	25	444	548	2	444	548	2	535	503
Pluralities	117	...	...	140	...	...	110	...	...	176	...	...	78	...	120	...	126	...	...	...	129	...	...	126	...	104	...	...	26	...

YELLOWSTONE COUNTY--Continued.

[illegible]

SEVENTH ANNUAL REPORT OF BUREAU

OFFICIAL VOTE OF THE STATE OF MONTANA BY COUNTIES, 1900.

PRECINCTS	President			Congress			Governor			Lieutenant Governor			Secretary of State		
Beaverhead	937	767	1	831	760	35	4	930	729	30	3	971	746	916	3
Broadwater	572	316	1	617	234	47	4	577	235	29	4	561	233	561	4
Carbon	907	909	1	907	909	257	15	711	276	29	15	709	232	907	19
Cascade	1,564	1,377	5	2,231	1,913	257	34	2,479	1,849	294	34	2,318	1,528	2,518	37
Chouteau	629	1,088	6	561	1,010	47	2	697	1,019	54	2	690	1,030	621	4
Custer	417	900	2	638	961	6	1	694	934	5	1	611	939	431	1
Dawson	209	521	2	248	49	3	1	209	490	5	1	216	486	257	4
Deer Lodge	2,367	1,086	17	1,653	1,675	1,061	100	1,885	1,822	1,556	83	1,557	1,489	2,167	88
Fergus	913	1,228	11	825	1,214	8	4	1,000	1,172	8	4	917	1,196	1,167	4
Flathead	1,201	1,104	24	911	1,038	280	15	1,086	1,024	251	14	915	1,194	1,194	14
Gallatin	1,297	1,146	22	1,117	1,222	176	15	1,201	1,066	179	15	1,137	1,127	1,296	17
Granite	1,080	401	9	1,171	1,361	190	5	806	848	196	4	799	1,000	909	5
Jefferson	980	468	9	834	431	94	8	919	400	19	8	813	491	909	7
Lewis and Clarke	2,703	2,043	42	2,654	1,933	152	23	2,862	1,764	179	30	2,745	1,886	2,679	32
Madison	1,298	1,000	6	1,199	1,029	96	1	1,296	965	91	2	1,146	1,130	1,263	1
Meagher	406	414	1	361	402	118	1	368	382	51	1	316	394	394	1
Minot	1,383	1,207	14	1,307	1,249	490	15	1,570	1,219	509	18	1,470	1,156	1,470	13
Mission	900	900	29	801	822	129	56	907	786	157	49	811	485	882	44
Park	1,082	823	34	601	947	353	15	874	1,219	509	18	1,470	1,156	1,470	13
Ravalli	12,101	3,673	240	7,856	2,927	4,823	227	8,463	2,928	4,790	308	7,852	2,941	12,101	12
Silver Bow	278	460	3	376	447	8	4	466	485	12	1	466	441	466	4
Sweet Grass	457	573	3	457	555	37	4	466	546	4	4	466	501	457	4
Teton	234	323	1	234	323	2	1	274	343	2	1	231	323	231	1
Valley	664	516	19	616	705	48	19	657	774	62	16	660	705	738	16
Yellowstone	37,146	25,373	708	32,139	23,207	9,443	613	37,119	32,691	9,188	546	39,700	32,325	37,471	650
Total	37,146	25,373	708	32,139	23,207	9,443	613	37,119	32,691	9,188	546	39,700	32,325	37,471	650
Proxies	11,773	.....	.....	4,923	.....	.....	.....	5,728	.....	.....	.....	6,478	.....	14,123	.....

OFFICIAL VOTE OF THE STATE OF MONTANA—Continued.

COUNTIES	Attorney General			State Treasurer			State Auditor			Sup' Public Instruction			Associate Justice Supreme Court			Amendment to Constitution				
	For	Against	Total	For	Against	Total	For	Against	Total	For	Against	Total	For	Against	Total	For	Against	Total		
Beaverhead	881	749	1,630	789	23	812	901	8	909	909	1,630	881	749	1,630	881	749	1,630	881	749	1,630
Broadwater	538	228	766	538	60	598	538	5	543	543	766	538	228	766	538	228	766	538	228	766
Carbon	603	885	1,488	603	253	856	603	34	637	637	1,488	603	885	1,488	603	885	1,488	603	885	1,488
Cascade	2,123	2,011	4,134	2,123	212	2,335	2,123	36	2,159	2,159	4,134	2,123	2,011	4,134	2,123	2,011	4,134	2,123	2,011	4,134
Chouteau	549	1,064	1,613	549	81	630	549	89	638	638	1,613	549	1,064	1,613	549	1,064	1,613	549	1,064	1,613
Custer	619	961	1,580	619	4	623	619	1	620	620	1,580	619	961	1,580	619	961	1,580	619	961	1,580
Dawson	653	608	1,261	653	252	905	653	1	654	654	1,261	653	608	1,261	653	608	1,261	653	608	1,261
Deer Lodge	653	608	1,261	653	438	1,091	653	87	740	740	1,261	653	608	1,261	653	608	1,261	653	608	1,261
Fergus	946	1,706	2,652	946	14	960	946	87	1,033	1,033	2,652	946	1,706	2,652	946	1,706	2,652	946	1,706	2,652
Flathead	916	1,067	1,983	916	924	1,840	916	12	928	928	1,983	916	1,067	1,983	916	1,067	1,983	916	1,067	1,983
Gallatin	1,078	1,118	2,196	1,078	172	1,250	1,078	65	1,143	1,143	2,196	1,078	1,118	2,196	1,078	1,118	2,196	1,078	1,118	2,196
Granite	729	405	1,134	729	16	745	729	14	743	743	1,134	729	405	1,134	729	405	1,134	729	405	1,134
Jefferson	827	619	1,446	827	9	836	827	8	835	835	1,446	827	619	1,446	827	619	1,446	827	619	1,446
Lewis and Clarke	2,959	2,018	4,977	2,959	125	3,084	2,959	25	2,984	2,984	4,977	2,959	2,018	4,977	2,959	2,018	4,977	2,959	2,018	4,977
Madison	1,169	1,046	2,215	1,169	90	1,259	1,169	2	1,171	1,171	2,215	1,169	1,046	2,215	1,169	1,046	2,215	1,169	1,046	2,215
Meagher	211	405	616	211	108	319	211	14	225	225	616	211	405	616	211	405	616	211	405	616
Mineral	1,414	1,394	2,808	1,414	42	1,456	1,414	14	1,428	1,428	2,808	1,414	1,394	2,808	1,414	1,394	2,808	1,414	1,394	2,808
Missoula	751	946	1,697	751	40	791	751	40	791	791	1,697	751	946	1,697	751	946	1,697	751	946	1,697
Park	605	329	934	605	13	618														
Salmon	605	329	934	605	13	618														
Silver Bow	3110	2,085	4,455	3110	446	3,556	3110	2	3,558	3,558	4,455	3110	2,085	4,455	3110	2,085	4,455	3110	2,085	4,455
Sweet Grass	441	861	1,302	441	25	466	441	8	449	449	1,302	441	861	1,302	441	861	1,302	441	861	1,302
Teton	547	857	1,404	547	2	549	547	2	549	549	1,404	547	857	1,404	547	857	1,404	547	857	1,404
Valley	607	794	1,401	607	19	626	607	19	626	626	1,401	607	794	1,401	607	794	1,401	607	794	1,401
Yellowstone	20,358	24,161	44,519	20,358	551	20,909	20,358	551	20,909	20,909	44,519	20,358	24,161	44,519	20,358	24,161	44,519	20,358	24,161	44,519
Total	20,358	24,161	44,519	20,358	551	20,909	20,358	551	20,909	20,909	44,519	20,358	24,161	44,519	20,358	24,161	44,519	20,358	24,161	44,519
Pursuities	4,067		4,067			4,067			4,067	4,067		4,067		4,067			4,067			4,067

NOTES

Since printing the congressional delegation of the state, the following election by the Seventh Legislative Assembly has occurred:

UNITED STATES SENATOR—SHORT TERM.

Name	Address	Elected	Term Expires
Paris Gibson.....	Great Falls.....	Mar. 7, 1901	Mar. 4, 1905

THE NEW LEGISLATIVE APPORTIONMENT

The following re-apportionment was made by the Seventh Legislative Assembly:

Counties	Senators	Representatives
Beaverhead	1	2
Broadwater... ..	1	1
Carbon	1	2
Cascade	1	7
Choteau.... ..	1	3
Custer	1	1
Dawson	1	1
Deer Lodge	1	4
Fergus	1	2
Flathead	1	3
Gallatin	1	3
Granite	1	1
Jefferson	1	2
Lewis and Clarke	1	5
Madison	1	2
Meagher	1	1
Missoula	1	4
Park	1	2
Powell (Deer Lodge)	1	1
Ravall.....	1	2
Rosebud.....	1	1
Silver Bow.....	1	12
Sweet Grass	1	1
Teton	1	1
Valley.....	1	1
Yellowstone	1	2
Total	26	67

NEW COUNTIES.

The Seventh Legislative Assembly created the following new counties:

Deer Lodge County was divided, creating the counties of Daly and Deer Lodge.

Deer Lodge county was formed of that part of the county lying north of Warm Springs creek, and the measure creating the county nominated the following for the first officers of the county:

Henry B. Davis, County Commissioner; William T. Kuehn, County Commissioner; T. B. Mannix, County Commissioner; John McMahon, Sheriff; James H. Mills, Clerk and Recorder; Robert G. Humber, Treasurer; A. D. Goodfellow, Assessor; R. Lee Kelley, Clerk of the District Court; James M. Simpson, County Attorney; Inez Elliott, County Superintendent of Schools; Nathan Smith, Coroner; W. I. Huffaker, County Surveyor; M. D. Platner, Public Administrator.

The southern portion of the county was created Daly county, and the officers elected at the last general election for Deer Lodge county became the officers of this county.

The county of Rosebud was created from the western portion of Custer county and Forsyth was made the county seat. Following are the officers of the new county.

Freeman Philbrick, Commissioner; W. W. McDonald, Commissioner; Hunter Terret, Commissioner; Charles W. Bailey, Clerk and Recorder; Charles Davis, Sheriff; T. W. Longley, Treasurer; James B. Grierson, Clerk of the District Court; Fred. L. Gibson, County Attorney; William Choisser, Assessor; Gertrude M. Higgins, Superintendent of Common Schools; R. W. Snook, Public Administrator; J. F. Kennedy, Coroner; Charles B. Taber, County Surveyor.

STATEMENT SHOWING VOTE OF THE STATES ON PRESIDENT-ELECTION
NOVEMBER 6, 1900.

	Electoral Votes		McKinley, R.....	Bryan, D.....	Woolley, pro.....	Barker, pro.....	Debs, soc. d.....	Maloney, soc. lab.
	McKinley	Bryan						
Alabama.....	11	53,869	96,369	1,407	3,797	.....	.....	.....
Arkansas.....	8	44,800	81,143	584	972	.....	.....	.....
California.....	9	164,755	124,925	5,034	.....	7,872	.....	.....
Colorado.....	4	93,072	122,733	3,790	389	684	714	.....
Connecticut.....	6	102,572	74,014	1,617	.....	1,029	906	.....
Delaware.....	3	22,560	18,363	546	.....	57	.....	.....
Florida.....	4	7,499	28,007	2,239	1,090	608	.....	.....
Georgia.....	13	35,036	81,700	1,396	4,684	.....	.....	.....
Idaho.....	3	27,198	29,414	867	213	.....	.....	.....
Illinois.....	24	597,985	508,061	17,636	1,111	9,687	1,373	.....
Indiana.....	15	336,063	309,684	13,718	1,438	2,374	663	.....
Iowa.....	13	307,806	200,265	9,502	613	2,742	250	.....
Kansas.....	10	185,365	162,601	3,006	.....	1,606	.....	.....
Kentucky.....	13	226,301	234,999	2,429	2,017	790	289	.....
Louisiana.....	3	14,233	53,671	.....	.....	.....	.....	.....
Maine.....	6	65,435	36,823	2,555	.....	879	.....	.....
Maryland.....	8	196,212	132,271	4,582	.....	903	391	.....
Massachusetts.....	15	239,147	157,016	6,206	.....	9,716	2,610	.....
Michigan.....	14	316,269	211,695	11,969	833	2,836	906	.....
Minnesota.....	9	199,461	112,901	8,555	.....	3,035	1,324	.....
Mississippi.....	9	5,753	51,706	.....	1,644	.....	.....	.....
Missouri.....	17	314,093	351,913	5,963	4,344	6,128	1,294	.....
Montana.....	3	25,373	37,146	296	.....	706	116	.....
Nebraska.....	8	121,035	114,013	3,636	1,104	823	.....	.....
Nevada.....	3	3,849	6,347	.....	.....	.....	.....	.....
New Hampshire.....	4	54,798	35,489	1,371	.....	790	.....	.....
New Jersey.....	19	221,707	164,905	7,133	699	4,609	2,074	.....
New York.....	35	821,992	678,886	22,043	.....	12,909	12,632	.....
North Carolina.....	11	133,061	157,762	1,009	830	.....	.....	.....
North Dakota.....	3	35,891	20,519	781	110	518	.....	.....
Ohio.....	23	549,918	474,882	10,309	351	4,347	1,658	.....
Oregon.....	4	46,536	33,285	2,536	275	1,494	.....	.....
Pennsylvania.....	32	712,665	424,232	27,908	635	4,531	2,936	.....
Rhode Island.....	4	33,784	19,812	1,829	.....	1,432	.....	.....
South Carolina.....	9	3,625	47,283	.....	.....	.....	.....	.....
South Dakota.....	4	54,530	39,544	1,542	239	189	.....	.....
Tennessee.....	12	123,008	145,250	3,900	1,869	410	.....	.....
Texas.....	15	130,641	267,432	2,614	29,981	1,846	162	.....
Utah.....	3	47,089	44,919	306	.....	717	106	.....
Vermont.....	4	42,569	13,949	333	367	.....	.....	.....
Virginia.....	12	115,865	146,060	2,150	.....	1,906	1,066	.....
Washington.....	4	57,456	44,333	2,945	.....	286	.....	.....
West Virginia.....	6	119,861	93,791	1,638	279	.....	.....	.....
Wisconsin.....	13	265,966	159,285	10,124	.....	7,065	524	.....
Wyoming.....	3	14,482	10,164	.....	2	.....	.....	.....
Total.....	292	155	7,217,677	6,357,833	207,368	50,138	91,523	33,459

In addition there were votes returned in five states for the candidates of the National Union Reform Party, Seth H. Ellis of Ohio, for President, and in two states for the candidates of the United Christian Party, J. F. R. Leonard of Iowa for President—these votes being as follows: National Union Reform—Arkansas, 341; Illinois, 672; Indiana, 254; Maryland, 147 and Ohio, 4,284; total, 5,698. United Christian—Illinois, 382; Iowa, 186; total, 518. Plurality of McKinley over Bryan, 239,814. Majority over all 463,070.

MONTHLY AND ANNUAL MEAN TEMPERATURES

Stations	January		February		March		April	
	Mean..	Dep..	Mean..	Dep..	Mean..	Dep..	Mean..	Dep..
Adel.....	30.8		18.6		33.7		41.7	
Augusta.....								
Big Timber.....							45.4	1.5
Billings.....	30.2	5.2	23.2	3.1	33.0	45.3	48.3	2.7
Boulder.....	27.4	8.6	22.2	1.2	35.7	9.5	44.2	2.9
Bozeman Agri. College.....	30.8		20.4		37.1		43.4	
Butte.....	30.2	7.1	23.0	0.7	37.6	10.6	44.5	0.7
Canyon Ferry.....	28.0		23.8		40.0		30.4	
Chester.....								
Chinook.....	27.0		12.3		29.9	11.2	49.2	4.9
Clemons.....	34.0	11.4	20.9	1.3	36.6	10.7	45.5	5.0
Columbia Falls.....	28.6	5.2	22.8	1.7	38.6	7.7	48.5	4.7
Corvallis.....	32.2		27.9		42.5		46.5	
Crow Agency.....	26.7	5.9	22.0	4.7	38.4	6.7	50.2	3.1
Culbertson.....								
Deer Lodge.....	29.2	7.9	25.7	1.4				
Dell.....	19.6		17.4		33.5		41.6	
Dillon.....	31.2		26.8		36.2		45.9	
Dupuyer.....					34.4			
Ekalaka.....	27.6		15.6		31.4		43.3	
Fort Benton.....	33.0	14.6	21.4	2.7				
Fort Logan.....	24.8	7.1	19.6	3.8	32.5	6.5	42.8	3.6
Glasgow.....	19.7	11.2	8.0	0.9	29.4	9.8	51.2	6.1
Glendive.....	25.9	12.0	14.2	1.0	29.4	5.0	54.2	6.6
Glenwood.....	29.6		21.3		36.4		44.4	
Great Falls.....	32.8	7.42	21.7	4.6	37.7	5.6	49.0	2.5
Harlem.....	26.4	12.2	13.2					
Havre.....	27.3	15.3	11.3	1.8	31.2	5.3	49.5	6.2
Helena.....	31.0	12.3	21.9		36.6	6.5	47.4	3.5
Kallispeil.....	30.4		23.9		39.2		48.0	
Kipp.....	26.8	7.9	16.8	2.0	32.5	9.3	44.0	4.1
Lewistown.....			18.0	6.6	35.0	9.3	46.3	4.3
Livingston.....					34.9	5.5		
Manhattan.....	26.6	6.3	23.2	0.2	37.8	9.4	47.2	
Martinsdale.....	31.7	3.7	21.8	0.4	35.8	7.6	45.2	3.2
Marysville.....	27.4	6.0	18.2	4.1	22.8	8.1	42.6	1.4
Miles City.....	29.4	13.2	16.8	0.8	24.2	5.7	53.0	6.8
Missoula.....	29.8	10.0	26.0	1.5	42.4	9.0	50.6	6.0
Ovando.....	19.8		19.3		32.6		45.9	
Parrot.....	31.6		24.5		33.8		46.4	
Plains.....	32.2		27.0		41.0		49.6	
Poplar.....	21.2	16.7	8.7	2.8	27.5	6.5	51.0	7.8
Red Lodge.....	27.7		17.6		31.5		42.0	
Ridge.....	27.8		17.8		33.6		48.2	
Ridgeland.....								
St. Paul's.....			17.5	2.1	33.2	11.0		
Troy.....	32.2	5.7	29.1	0.8	41.0	6.8	50.8	3.3
Twin Bridges.....	28.8		22.3		35.2		45.3	
Utica.....	30.6	7.6	20.4	2.6	33.4	7.7	45.8	3.1
Wilbax.....	24.6	8.0	14.8	4.4			46.8	0.3
Yale.....	36.2	3.8	21.4	4.1	33.9	7.4	44.4	3.2
Fort Yellowstone.....	22.1		15.5	3.3	24.0	7.7	42.0	
Lovell, Wyo.....	21.8		18.5		26.8		45.2	
Parkman, Wyo.....			21.8		35.6		45.9	
Sheridan, Wyo.....	25.0	6.9	20.6	2.9	25.4	8.3		
Williston, N. D.....	19.1		3.2	15.8	22.8	0.6	51.4	9.0
Spokane, Wash.....	35.8	11.5	31.5		45.2	6.2	51.1	

WITH DEPARTURES FROM THE NORMAL

May		June		July		August		September		October		November		December		Annual	
Mean..	Dep...	Mean..	Dep...	Mean..	Dep...	Mean..	Dep...	Mean..	Dep...	Mean..	Dep...	Mean..	Dep...	Mean..	Dep...	Mean..	Dep...
49.0		58.2		59.8						45.9		59.8					
				74.7	2.9	59.6	0.7	57.6	2.3								
53.3	3.6	63.7	6.7	62.0	0.4	59.6	3.3	48.2	3.0	41.4		36.5	4.0	30.0	5.6	43.8	2.2
53.4		63.8		63.4		59.0		53.1		43.5		29.8		30.0		44.1	
53.5	3.7	63.8	7.1	63.9	1.0	59.2	3.8	51.3	0.8	43.5	0.1	33.7	1.4	30.5	4.7	44.5	2.9
53.2		70.0		69.8		66.0		54.6		48.6							
						59.1		59.5		54.4		30.5		27.0			
60.0	4.1	69.2	4.6	70.2	0.4	67.0	0.8	63.6	1.8								
52.8	3.5	61.3	4.1							45.2	0.9	29.0	0.3	34.1	6.5		
51.7	1.0	60.8	2.6	63.9	0.7	57.2	7.3	33.6	0.1	42.2		27.6		31.4	5.3	42.8	
54.0		64.3		66.4		61.2		66.4		48.6		32.0		34.9		47.3	
60.1	3.7	70.0	5.6	70.0	1.2	67.6	3.3	56.8	2.8	47.8	0.5	30.4	1.7	32.2	4.4	47.5	2.0
														21.0			
51.1		62.8		63.5		59.1						26.2		21.2			
56.4		64.6		61.6		59.8		52.2		43.5		31.2		31.2		45.1	
52.8		65.0		65.6		55.6											
64.1		71.0		71.0				60.3		49.6		29.2					
59.0	2.3	70.0	5.9	69.9	0.5	65.4	2.5										
51.4	3.6	60.3	4.4	60.8	1.8	58.0	3.0	48.3	2.7	42.6	1.0	27.8	0.9	27.0	6.1	41.4	3.3
61.6	4.3	70.3	6.0	71.0	0.2	69.0	0.8	63.6	2.4	47.0	4.1	17.6	3.7	22.0	4.7	42.4	2.4
63.7	5.2	72.5	6.1	72.4	0.6	72.2	0.2	65.6	4.8	49.8	2.3	33.4	4.6	28.1	6.3	46.8	2.9
61.8		63.2		63.0		60.2		62.0		42.4		28.8		30.4		43.7	
57.8	3.4	68.6	6.3	69.6	1.0	65.2	1.4	54.1	2.8	47.2	10.9	31.6	0.5	37.3	6.5	47.7	3.8
58.7	5.7	68.2	6.9	68.8	1.2	65.8	0.1	55.4	2.1	46.8	3.6	33.8	4.8	31.5	9.3	44.7	3.7
55.4	3.3	66.1	6.3	67.0	0.1	63.8	2.6	53.0	2.3	45.8	0.6	29.5	2.1	32.8	6.6	46.0	2.6
52.6		61.6	1.6	63.4	1.8	58.4	4.6	51.9	1.9	43.6		37.8		31.3	4.4	44.3	
50.8	2.2	59.4	3.8	58.7	2.4	56.4	1.5	48.4	1.3	39.0	0.1	25.1	0.4	32.3	7.3	40.8	2.3
55.1		64.6		65.1		61.2		61.8		44.2		29.8		30.8			
56.2		66.4		66.4		64.7		56.7		49.8	2.4	34.5	3.4	37.2	6.9		
55.8	3.2	65.6	5.8			61.6	0.8	53.6	1.4	44.4	3.4	28.4	0.4				
53.0	2.4	63.6	5.1	64.2	1.7	62.3	2.2	51.4	2.3	44.0	0.7	30.4	0.8	32.3	5.3	44.7	2.3
50.8	2.2	61.8	5.6	63.1	0.1	59.0	3.4	48.8	2.7	42.1	0.3	27.8	1.3	29.0	3.4	42.0	1.3
63.8	7.2	73.6	7.6	73.4	0.5	71.9	0.2	67.8	2.5	50.6	3.5	27.8	1.0	30.8	7.1	48.6	4.1
55.9	1.9	64.6	4.7					55.4		45.8	1.0	29.0	3.1	29.9	5.3		
51.0		57.6		58.3		54.6		49.0		29.9		23.2		23.6		39.6	
56.0		57.2		56.8		64.0		53.4		44.4		23.0					
55.8		54.8		57.3		61.8		55.0		45.8		31.0		34.0		47.1	
62.4	8.0	71.0	6.9	72.0	3.4	71.0	4.0	55.3	1.6	47.8	4.3	21.0	3.8				
50.0		64.0		62.4		61.0		49.6						27.9			
60.1		69.2		69.8		70.6											
63.2		70.6		70.7		69.8		64.3		48.3		20.6		34.6			
		67.2	6.7	66.6		64.6	1.2	53.0	3.5	43.9				32.2			
54.5	0.3	61.8	1.0	63.7	1.1	59.4	3.3	56.2	1.0	45.1	4.1	31.2	4.2	32.5	4.0	46.5	1.1
53.2		62.4		62.4		60.5		51.4		43.0		28.9		27.4		43.2	
54.6	3.6	64.9	5.8	66.2	0.9	62.8	2.6	51.6	3.1	45.2	1.4	29.4	1.0	32.0	3.3	44.7	2.0
53.1	2.0	63.2	3.9	60.0	0.4	64.6	2.6	53.5	2.8	46.8	0.5	27.2					
53.8	4.1	66.0	7.1	66.0	1.3	64.7	0.6	52.6	1.5	43.6	2.0	29.7	1.5	32.3	4.1	44.6	2.3
50.5	3.1	62.0	7.0	61.2	1.1	60.6	0.9	60.0	2.8	42.4	1.1	29.0	0.5	24.4	3.0	41.1	
61.6		70.4		68.2		67.2		53.5		46.3		26.6		27.2		44.8	
56.0		67.0		67.2		67.0		55.9		42.4		32.7		34.0			
		66.9	5.3	66.0	1.1	66.4	0.1	56.1	0.4	47.6	3.4	30.4	0.8	31.6	7.1		
62.2	7.0	69.0	2.0	70.2	2.0	68.9	2.9	53.4	3.0	47.2	4.0	18.8	6.0	21.2	7.0	43.2	
57.5	1.0	66.0	4.0	69.6	1.0	64.0	0.4	58.2		48.2		34.2	3.0	37.1	6.0	50.0	

MONTHLY AND ANNUAL PRECIPITATION

Stations	January		February		March		April	
	Prec...	Dep...	Prec...	Dep...	Prec...	Dep...	Prec...	Dep...
Adel.....	0.30		1.20		1.43		2.52	
Augusta.....							12.37	
Big Timber.....								
Billings.....								
Boulder.....	0.53	0.35	0.75	0.45	0.55	0.22	1.58	0.16
Bozeman Agr. Col.....	0.11		1.60		0.80		5.24	
Butte.....	0.30	0.04	1.05	0.35	1.20	0.37	2.75	1.53
Canyon Ferry.....	T		0.50		0.50		1.07	
Chester.....								
Chinook.....	0.10		0.85		1.00	0.30	1.05	0.18
Clemons.....	0.30	1.19	1.80	0.72	0.85	0.80	3.37	1.53
Columbia Falls.....	0.31	1.51	0.32	0.53	0.54	0.75	1.44	0.17
Corvallis.....			0.45		0.35		1.45	
Crow Agency.....	0.01	0.75	0.51	0.05	0.10	0.58	2.90	2.54
Culbertson.....								
Deer Lodge.....	0.04	0.69	0.13	0.48				
Dell.....	0.20		0.65		0.40		2.53	
Dillon.....	0.01		0.31		1.23		2.37	
Dupuyer.....					1.10			
Ekalaka.....	0.25		0.65		0.80		0.91	
Fort Benton.....	T	0.63	0.30	0.14				
Fort Logan.....	T	0.60	0.54	0.19	0.79	0.01	1.32	0.35
Glasgow.....	0.11	0.54	0.51	0.19	1.47	0.03	1.16	0.15
Glendive.....	0.01	0.74	0.70	0.11	1.50	0.30	0.60	0.83
Glenwood.....	0.13		1.20		0.56		1.10	
Great Falls.....	0.02	0.80	0.77	0.30	0.53	0.23	1.39	0.13
Harlem.....	0.20							
Havre.....	0.12	0.70	0.72	0.18	0.76	0.20	1.38	0.41
Helena.....	0.03	1.15	0.64	0.11	0.90	0.03	2.40	1.31
Kalispell.....	0.24		0.90		0.58		1.33	
Kipp.....	0.17	0.54	1.00	0.10	0.62	1.01	1.32	0.10
Lewistown.....			0.50					
Livingston.....	T	0.60	0.14	0.55	0.44	0.44		
Manhattan.....	0.05	0.20	0.40	0.05	0.32	0.53	1.11	0.33
Martinsdale.....	0.20	1.14	0.70	0.15	0.40	0.60	4.73	3.21
Marysville.....	0.06	1.20	1.70	0.48	0.60	0.72	1.85	0.59
Miles City.....	0.13	1.40	0.30	0.56	0.77	0.67	0.98	0.01
Missoula.....	0.15	1.47	0.37	0.53	0.57	0.22	1.22	0.05
Ovando.....	2.51		2.24		1.15		0.77	
Parrot.....	T		0.20		0.57		2.05	
Plains.....	0.40		0.80		0.20		1.35	
Poplar.....		0.64	0.30	0.23	2.35	1.96	1.27	0.23
Red Lodge.....	1.90		1.50		1.62		7.90	
Ridge.....	0.80		0.20		0.70		2.64	
Ridgeland.....								
St. Paul's.....			1.09	0.01	1.01	0.01		
Troy.....	2.23	0.11	1.05	0.47	3.03	1.23	0.90	0.43
Twin Bridges.....								
Utica.....	0.45	0.23	0.35	0.03	0.21	0.61	2.85	1.50
Wibaux.....	T	0.74	0.30	0.05			0.70	0.42
Yale.....	0.69	0.13	0.35		0.80	0.48	2.90	1.57
Fort Yellowstone.....	0.53		1.65	0.60	2.13	0.72	1.81	
Lovell, Wyo.....	0.07		0.20		0.17		1.62	
Parkman, Wyo.....			0.22		0.75		4.77	
Sheridan, Wyo.....	0.10	1.05	0.65	0.52	1.11	0.41	4.18	
Williston, N. D.....	0.01		0.95	0.34	1.25	0.61	0.57	0.90
Spokane, Wash.....	1.39	1.20	1.19		2.35	0.32	1.09	

May		June		July		August		September		October		November		December		Annual	
Prec.	Dep.	Prec.	Dep.	Prec.	Dep.	Prec.	Dep.	Prec.	Dep.	Prec.	Dep.	Prec.	Dep.	Prec.	Dep.	Prec.	Dep.
3.85		0.51		0.24						0.05		1.96		1.40			
														T			
1.88	0.41	0.19	1.3	0.97	0.13	0.54	0.00	1.17	0.00	1.57	0.96	0.10	0.17	0.37	0.07	10.24	0.01
2.61		0.39		1.33		0.68		1.24		1.63				0.62			
2.90	1.18	0.96	0.91	1.13	0.03	0.43	0.06	1.40	0.00	2.06	1.38	0.30	0.46	0.40	0.32	14.55	2.44
5.80		0.10		0.55		1.42		2.30		1.34		0.17					
		0.10		0.50		1.70		0.16		0.02		0.39		T			
0.97	1.60	0.86	1.71	0.64	0.13	1.02	0.03	2.22	1.36								
4.20	1.63	1.60	1.16									0.75	0.30	0.41	0.33		
4.97	2.52	0.93	1.53	0.87	0.85	2.11	0.64	3.70	0.71	3.42		1.59		0.99		23.49	
2.30		1.49		0.50		1.30		0.90		0.30		0.70		0.55		9.79	
0.47	1.73		2.82	0.39	0.92	3.53	1.32	0.90	0.18	0.31	0.41	0.50	0.25	0.32	0.35	10.60	2.41
														0.30			
0.05		0.15		0.01		1.10		0.45		1.05		0.60		T		7.24	
1.56		0.73		0.61		1.32		1.24		2.84		1.15		0.17		13.54	
7.54		5.01		0.30		3.20											
0.98		0.66		0.73				1.37		0.04		0.30					
0.90	1.85	0.82	1.30	0.53	1.12	0.65	0.29										
1.61	0.28	0.67	1.30	0.15	0.32	0.49	0.00	1.31	0.32	1.18	0.35	0.36	0.61	0.34	0.16	8.77	1.70
1.62	0.28	0.15	1.76	0.20	0.30	0.33	0.00	0.83	0.14	0.71	0.62	0.73	0.06	0.91	0.47	9.41	2.10
0.78	1.69	0.86	2.59	0.47	1.19	2.40	1.70	2.90	1.75	1.10	0.04	0.65	0.13	0.17	0.36	13.43	3.50
2.65		0.23		0.86		1.16		2.30		2.58		0.53		0.77		13.77	
2.73	0.50	0.64	2.17	0.48	1.00	1.83	0.93	1.17	0.14	0.90	0.25	1.44	0.46	0.20	0.37	11.08	1.67
0.38	0.90	0.62	2.31	1.37	0.63	1.62	0.30	2.21	1.06	0.88	0.15	0.64	0.10	0.28	0.29	11.48	2.65
3.22	1.37	0.19	2.00	0.33	0.88	0.59	0.08	1.39	0.27	1.21	0.23	0.30	0.54	0.43	0.37	11.62	1.80
3.90		1.40		0.75													

**NORMAL TEMPERATURE FOR STATIONS HAVING FIVE OR MORE YEARS
RECORD UP TO JANUARY 1, 1901.**

Stations	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Annual Normal
Billings...	25.0	26.2	22.7	21.0	27.0	33.2	71.3	68.9	59.9	.....	.....	29.5	.....
Boulder	18.9	21.0	27.2	41.3	49.7	57.0	61.6	62.9	61.2	41.4	30.5	24.4	40.6
Butte	23.1	23.7	27.0	40.1	48.8	56.7	63.9	63.0	51.8	43.7	22.3	25.8	41.6
Chinook...	.....	.....	18.7	44.3	55.9	64.6	69.6	67.8	55.0	.....	.....	.....	.....
Clemous	22.6	22.2	25.9	40.5	49.3	57.2	64.0	62.4	52.7	44.3	29.8	27.6	41.7
Columbia Falls	23.4	24.5	29.9	44.1	52.7	58.2	64.6	64.5	52.7	.....	.....	26.1	.....
Crow Agency	20.8	17.3	29.7	47.1	56.4	64.4	71.2	70.9	59.6	48.2	32.1	27.8	45.5
Deer Lodge	21.3	24.3	29.4	40.5	49.4	59.0	64.7	60.3	52.1	39.6	31.0	21.6	41.1
Fort Benton	18.4	24.1	29.7	45.6	56.7	64.1	70.4	67.9	58.5	47.4	30.1	21.7	44.6
Fort Logan	17.7	16.9	26.0	39.2	47.8	53.9	62.6	61.0	51.5	41.6	32.7	20.9	39.1
Glasgow...	8.5	8.9	19.6	45.1	57.3	64.3	71.2	69.2	56.0	42.9	21.8	17.6	40.0
Glendive	13.9	13.3	24.4	47.6	58.5	66.4	73.0	72.0	60.4	47.5	33.0	21.8	43.9
Great Falls.....	25.4	26.3	23.1	45.5	54.4	62.3	68.6	66.6	56.9	37.2	32.1	30.8	44.9
Havre	12.0	12.1	25.9	43.3	53.0	61.2	67.6	65.7	55.5	43.2	28.6	22.2	41.0
Helena	18.7	21.9	32.1	43.9	52.2	59.8	66.9	64.4	56.3	45.2	31.6	25.1	43.4
Kalispell..	.....	.....	.....	.....	.....	60.0	65.2	63.0	53.8	.....	.....	26.9	.....
Kipp	18.9	18.8	32.2	39.9	48.6	55.6	61.1	57.9	49.9	39.1	25.5	25.0	38.6
Lewistown .....	.....	24.6	25.7	42.0	.....	.....	.....	.....	.....	.....	.....	.....	.....
Livingston	25.1	25.2	29.4	42.9	.....	.....	.....	.....	.....	47.4	31.1	30.3	.....
Manhattan	20.3	23.5	37.8	.....	52.6	59.8	65.0	62.4	52.3	41.0	28.0	21.5	.....
Martinsdale	23.0	21.4	26.2	42.0	51.3	58.5	65.9	64.5	52.7	43.3	31.2	27.0	42.5
Marysville	21.4	22.3	24.7	41.2	48.9	56.2	63.2	62.4	51.5	41.9	29.1	25.6	40.7
Miles City	16.2	16.0	23.5	46.2	56.6	65.0	72.9	71.7	60.3	47.1	28.8	23.7	44.5
Missoula	19.5	24.5	32.4	44.6	54.0	59.9	66.8	65.3	55.4	44.8	32.1	24.6	43.8
Poplar	4.5	5.9	21.0	42.2	54.4	64.1	69.6	67.0	56.9	43.5	24.8	13.1	39.0
St. Paul's .....	.....	19.6	22.2	.....	60.5	.....	.....	55.8	56.5	44.7	.....	.....	.....
Troy	26.5	29.9	34.2	47.5	54.3	60.8	64.8	62.7	55.2	45.2	35.4	28.5	45.4
Utica	22.0	23.0	25.7	42.7	51.0	59.1	65.3	65.4	54.7	43.8	30.4	28.7	42.7
Wibaux.....	16.6	19.2	26.2	47.1	56.1	64.3	69.4	67.2	56.3	45.8	37.2	23.8	43.3
Yale	23.0	25.5	26.5	41.2	49.7	58.9	64.7	64.1	54.1	41.6	31.3	28.1	42.4

NORMAL PRECIPITATION TO JANUARY 1, 1901.

Stations	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Annual Mean
Billings...	0.86	0.20	.....	0.94	2.58	3.08	0.79	1.12	.....	.....	.....	0.23	.....
Boulder	0.88	0.30	0.31	1.43	1.47	2.06	0.84	0.57	1.15	0.62	0.27	0.30	10.25
Butte	0.94	0.70	0.93	1.17	1.72	1.57	1.16	0.53	1.21	0.80	0.66	0.62	12.11
Chinook...	.....	.....	0.70	0.87	2.57	2.06	0.52	1.06	0.96	.....	.....	.....	.....
Clemous	1.39	1.06	1.45	1.84	2.87	2.63	1.10	1.16	1.19	1.13	1.14	0.74	17.45
Columbia Falls	1.52	1.35	1.29	1.37	2.45	2.51	1.72	1.47	2.90	.....	.....	.....	.....
Crow Agency	0.80	0.46	0.62	1.45	2.20	2.82	1.31	0.96	0.51	1.22	0.73	0.57	14.01
Deer Lodge	0.73	0.61	0.88	1.08	1.84	2.71	0.98	1.19	0.89	0.90	0.75	0.59	13.06
Fort Benton	0.63	0.44	0.63	1.18	2.65	2.42	1.15	0.84	0.94	0.69	0.55	0.62	13.09
Fort Logan	0.60	0.35	0.80	0.98	1.19	1.97	0.97	0.53	0.99	0.93	0.97	0.50	10.53
Glasgow...	0.45	0.73	1.53	1.34	1.90	1.91	0.59	0.33	0.69	1.32	0.70	0.53	12.02
Glendive	0.74	0.59	1.30	1.42	2.47	2.54	1.66	0.70	1.15	1.14	0.76	0.53	16.00
Great Falls.....	0.08	0.47	0.76	1.20	2.23	2.81	1.46	0.61	1.03	0.65	0.96	0.47	13.25
Havre	0.82	0.54	0.57	0.91	1.78	2.83	2.00	1.32	1.17	0.71	0.74	0.55	14.10
Helena	1.18	0.75	0.82	1.15	1.83	2.28	1.11	0.67	1.19	0.91	0.84	0.80	13.46
Kalispell..	.....	.....	.....	.....	1.59	1.13	1.42	.....	.....	.....	.....	0.76	.....
Kipp	0.31	0.90	1.63	1.42	3.00	1.10	1.35	1.52	2.18	1.56	1.82	0.90	20.17
Lewistown .....	.....	1.01	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Livingston	0.60	0.69	0.68	0.68	.....	.....	.....	.....	.....	1.16	1.28	0.46	.....
Manhattan	0.35	0.45	0.34	0.79	1.35	1.53	0.73	0.39	1.04	0.88	0.50	0.32	8.27
Martinsdale	1.24	0.95	1.00	1.44	2.18	2.62	1.90	0.67	1.28	0.95	1.20	0.71	16.05
Marysville	1.32	1.22	1.22	1.15	2.29	2.16	1.15	1.01	1.48	0.91	1.53	1.02	16.59
Miles City	0.51	0.42	1.44	1.28	2.17	2.14	0.96	0.91	0.79	1.02	0.71	0.33	12.68
Missoula	1.02	0.95	1.00	0.97	1.95	2.10	1.07	0.76	1.20	1.32	1.44	1.50	15.31
Poplar	0.64	0.53	0.90	1.05	1.70	2.51	1.72	0.84	0.78	0.80	0.91	0.42	13.35
St. Paul's .....	.....	1.01	1.06	.....	.....	1.70	0.91	0.71	0.55	0.92	0.69	.....	.....
Troy	2.34	1.52	1.70	1.23	2.05	2.01	0.88	0.91	2.90	1.68	4.47	2.45	23.71
Utica	0.68	0.33	0.82	1.23	2.39	2.14	1.8	1.04	0.94	0.99	1.31	0.47	15.34
Wibaux.....	0.74	0.26	0.72	1.12	2.33	4.09	2.25	1.13	0.54	0.50	0.68	0.25	14.71
Yale	0.47	0.35	1.28	1.42	1.60	1.42	1.66	0.54	0.66	1.03	1.00	0.38	11.81

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